

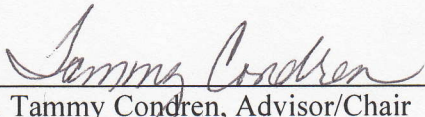
THE RELATIONSHIP BETWEEN ASSESSED VALUATION AND THE PERCENT  
OF STUDENTS WITH DISABILITIES IN MISSOURI SCHOOL DISTRICTS

©Copyright by  
TAMMY ERWIN  
2019

The undersigned, approved by the Department Chair of Graduate Studies in Education, have examined a dissertation entitled:

THE RELATIONSHIP BETWEEN ASSESSED VALUATION AND THE PERCENT  
OF STUDENTS WITH DISABILITIES IN MISSOURI SCHOOL DISTRICTS

Presented by Tammy Erwin, a candidate for the degree of Doctor of Education, and hereby certify that in their opinion it is worthy of acceptance.



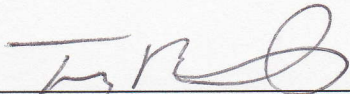
---

Dr. Tammy Condren, Advisor/Chair  
Graduate Studies in Education  
Southwest Baptist University



---

Dr. Benny Fong, Committee Member  
Graduate Studies in Education  
Southwest Baptist University



---

Dr. Troy Bethards, Committee Member  
Dean of the Robert W. Plaster College of Business and Computer Science  
Southwest Baptist University

THE RELATIONSHIP BETWEEN ASSESSED VALUATION AND THE PERCENT  
OF STUDENTS WITH DISABILITIES IN MISSOURI SCHOOL DISTRICTS

---

A Dissertation  
Presented to  
The Faculty of the Graduate Education Department  
Southwest Baptist University

---

In Partial Fulfillment  
of the Requirements for the Degree

Doctor of Education

---

By

Tammy Erwin, B.A., M.S., Ed. S.

Dr. Tammy Condren, Dissertation Advisor

2019

## ACKNOWLEDGMENTS

I would like to thank my family and friends for their support and patience through this process. Your belief in me has always made it easier for me to chase my dreams. Thank you to Jacqueline, Steve, and Colleena for listening to me talk about my paper constantly and always encouraging me. A huge thank you to Cassie and Mary Beth for always dusting me off and keeping me moving in the right direction.

I would like to thank the faculty at Southwest Baptist University for providing me with the opportunity to learn and obtain this degree. I would especially like to thank Dr. Tammy Condren for her patience, push, and time as my advisor and committee member. I am so grateful for your belief in me when I was ready to throw my hands to the sky. You are truly a difference maker. You have inspired me more than you will ever know. I would like to thank my committee members, Dr. Benny Fong and Dr. Troy Bethards, for your statistical guidance, support, and time during this process.

## TABLE OF CONTENTS

ACKNOWLEDGMENTS .....	ii
TABLE OF CONTENTS.....	iii
LIST OF TABLES.....	vi
ABSTRACT.....	vii
INTRODUCTION.....	1
Problem Statement .....	4
Rationale for the Study .....	5
Research Questions/Hypotheses.....	8
Theoretical Framework.....	9
Limitations, Delimitations, and Assumptions.....	10
Limitations.....	10
Delimitations.....	10
Assumptions.....	11
Design Controls.....	12
Definition of Key Terms .....	13
Summary.....	14
REVIEW OF LITERATURE.....	16
Introduction.....	16
History of Assessed Valuation.....	17
Marx Conflict Theory.....	20
Assessed Valuation and Socioeconomic Status.....	21
Achievement and Socioeconomic Status.....	28

Socioeconomic Status and Special Education Needs.....	31
The Missouri IEP Process.....	34
The Relationship Between Poverty and Students With Disabilities.....	36
Summary.....	41
RESEARCH DESIGN AND METHODOLOGY.....	43
Introduction.....	43
Research Questions and Hypotheses .....	43
Research Procedures.....	44
Research Design.....	45
Sampling.....	45
Instrument.....	45
Human Participants.....	48
Data Analysis.....	48
Summary.....	49
ANALYSIS OF THE DATA.....	51
Introduction.....	51
Data Analysis and Findings .....	52
Samples.....	53
Demographics.....	54

Data Cleaning.....	54
Descriptive Statistics.....	55
Research Question 1.....	56
Analysis of 2012 Data.....	57
Analysis of 2013 Data.....	58
Analysis of 2014 Data.....	58
Analysis of 2015 Data.....	59
Analysis of 2016 Data.....	59
Research Question 2.....	60
Analysis of 2012 Data.....	63
Analysis of 2013 Data.....	63
Analysis of 2014 Data.....	63
Analysis of 2015 Data.....	64
Analysis of 2016 Data.....	64
Summary.....	65
CONCLUSIONS AND RECOMMENDATIONS.....	66
Introduction.....	66
Research Questions.....	66

Summary of Methods.....	67
Summary of Findings.....	68
Assessed Valuation and the Percentage of Students With Disabilities.....	69
Factors That Predict Students With Disabilities Percentages.....	72
Implications for Educational Practice.....	73
Recommendations for Future Research.....	74
Summary.....	75
REFERENCES.....	77

## LIST OF TABLES

Table 1. Pearson $r$ Correlation Research Question1: Descriptive Statistics.....	55
Table 2. Pearson $r$ Correlations Research Question 1: Correlations.....	56
Table 3. Multiple Regression Research Question 2: Regression Model Summary.....	61
Table 4. Multiple Regression Research Question 2: Regression ANOVA.....	62
Table 5. Multiple Regression Research Question2: Regression Coefficients.....	63

## ABSTRACT

The world of education is ever changing as students are preparing for jobs that have yet to be created. Students who are raised in a home with a low socioeconomic background face additional challenges and are more likely to be one of the 6,700,000 students who receive special education services. This research examined the impact assessed valuation of school districts in the state of Missouri had on the percentage of students receiving special education services from 2012-2017. This research will provide data and recommendations to administrators and educators to assist to better educate this rapidly growing category of students. Though no statistically significant relationship between assessed valuation and special education percentages was found, the researcher did discover trends in special education growth during the years studied. This correlation study will also provide an insight into the impact of poverty and property taxes on the education of all students.

## CHAPTER ONE

### INTRODUCTION

Six hundred and seventy billion dollars. That is the projected expenditures total for public schools in the United States within the next 13 years (Hussar & Bailey, 2018). The U.S. education industry represents a billion dollar opportunity responsible for the education of close to 50,700,000 United States students (Teasley, 2017). Of those students, 6,700,000 receive special education services and 13.7 million live in poverty, both factors that can greatly affect a student's success in school and beyond (McFarland et al., 2018).

Today's students face a much different concept of what education and school looks like than students did less than ten years ago. As the world continues to develop and evolve at such a rapid pace technologically, school districts are forced to prepare students to be successful in a world that we cannot yet even imagine (Dutro & Selland, 2012). Research by Tavernise (2012) stated as the poverty rate increases and more and more students start school with this remedial status, the education system in the United States is not able to serve as the country's great equalizer. Historically, as low socioeconomic students have worked hard and received quality education, they were able to go on to college and find a successful career or graduate career ready. However, with our low socioeconomic students working so hard to play catch-up, the gap widens, and the leveling effect of education slowly disappears (Tavernise, 2012).

In 1975, President Gerald Ford signed Public Law 94-142, the Education for All Handicapped Children Act, which is now known as the Individuals With Disabilities Education Act (IDEA). This law provides a free appropriate public education to students

identified as having disabilities (U.S. Department of Education, 2018). Special education and related services are provided to more than 6,500,000 identified individuals in the United States. The Every Student Succeeds Act of 2015 Public Law 114-95 amended IDEA to state that a disability is a natural part of the human experience and does not diminish the individual's participation or contribution to society. It is essential to continue to improve the education of students with disabilities in order to provide an equal opportunity, participation, independent living, and economic self-sufficiency (U.S. Department of Education, 2018).

According to the U.S. Department of Education, in 1981 the President's budget for special education was \$957,862 of the \$5,513,053 reserved for elementary and secondary education. By 2010, the President's budget for special education increased to \$12,579,677, second only to ESEA Title 1 grants to local educational agencies of the President's total budget of \$39,636,950 for elementary and secondary students. Also in 2010, the President budgeted \$70,585 for research and innovation in special education. In 2017, the President's budget for special education rose to \$13,066,858 of the total President's budget of \$43,115,523 allocated for elementary and secondary education. Research and innovation in special education also received \$54,000 in 2017 (U. S. Department of Education, 2018).

In the state of Missouri, school districts along with cities, counties, and other local taxing districts rely on property taxes to fund their operations. This process involves the local assessor assigning a value to taxable property every 2 years. School districts and local governments then use those values to set their property tax rates. The rate and value are combined to calculate the annual property tax bill sent out each year to homeowners

and other types of property owners. In the state of Missouri, those property taxes are the primary source of funding for local government authorities (Harbin, Stokes, & Smith, 2011).

The use of property taxes in school funding may lead to further disparity and inequities in per-pupil property wealth among school districts in the state of Missouri. Children may have access to better school districts in property-rich districts, but taxpayers may be disadvantaged in property-poor districts that require higher tax rates to finance a similar quality education for children in that district (Kenyon, 2007). Furthermore, families that may be able to afford a higher property tax rate might also be able to afford alternative educational routes like private schools or computer-based homeschool programs. Families may also be willing to pay more for a home in a high-performing school district than for a similar property in a poor-performing school district.

The number of charter schools is increasing, raising the importance of performance on our public school systems in the United States. Research by Stevens, Marder, and Nagel (2015) revealed that schools outside of Chicago performed consistently with the concentration of students living in poverty. Areas with high numbers of low socioeconomic students performed better than school districts with a poverty concentration less than 20%. Although test scores in Illinois have increased, areas of low socioeconomic population have not changed, implying the total impact poverty has on test performance and student outcomes can be overcome slowly with these factors: support of students' needs, use of hard data, accountability, relationships with students, and an enrichment mind set (Stevens et al., 2015).

Home and family factors such as income, parent education, and cultural diversity play significant roles in a student's education. Studies documented by Fujiura and Yamaki (2000) have found a growing relationship between student poverty and the risk for disability. Among students with disabilities ages 3 to 21 in the United States, 28% are living in poverty, while 16% of students in the same group are not disabled (Chilman, Cox, & Nunnally, 1991). For the families of students with disabilities living in poverty, daily survival and basic needs are seen as a higher priority than academic goals or what a quality education may bring in the future (Enwefa, Enwefa, & Jennings, 2006).

### **Problem Statement**

Hager (2005) concluded that students who qualify for free or reduced priced meals in the state of Missouri not only have negative impact on standardized assessment scoring, but also the per-pupil expenditure (PPE) of a school district is a good indicator of how a district will perform in accordance to the Missouri School Improvement Program (MSIP), the state's accountability system for accrediting public schools. The PPE, especially in districts of smaller size, can have a negative or positive effect on the amount of resources that can be spent on quality instruction and resources and, in turn, student achievement.

As the United States continues to fall behind other countries in student assessments, the struggle of school districts in economically disadvantaged areas continues (Morgan, 2012). School districts cannot control the economy of the community they serve. Research has given schools possible modification to help all students find success, although some feel we are failing our students with the way our current education system is designed (McGee, 2004). Schools continue to look for better ways to

serve and educate the students that make up our future professionals and workforce. Students today must develop an entirely different set of skills to become successful. As the expectation for school districts to provide a quality education for students continues to increase, so does the gap between the socioeconomic statuses of the students within our schools (Ullman, 2007). Students with disabilities were granted the right to a free appropriate education in the least restrictive environment with the IDEA. In 2013, it was estimated by the Centers for Disease Control and Prevention that 53,000,000 adults or 22% of adults in the United States live with some type of disability (Nepo, 2017).

In the state of Missouri, there were 115,948 students ages 6-21 receiving special education services during the 2017-2018 school year (DESE, 2018). The number of students who were eligible to receive early childhood special education services (ages 3 – pK5) in Missouri reached 12,820 in 2016-2017. The total number of special education referrals from June 2017-May 2018 was 12,269, with 5,191 resulting in Individualized Family Service Plans (IFSP) or 42.3% (DESE, 2017). The data from these figures, coupled with prior research findings regarding the educational achievement gaps, socioeconomic status, and district accountability creates the problem of equal educational expectations but with unequal funding for public school districts.

### **Rationale for the Study**

The average educational spending per pupil in the United States in 2015 was \$11,392. This was the largest per pupil spending total since 2008 when the United States spent \$11,009 per pupil (United States Census Bureau, 2017). Although these numbers were the average across the United States in 2015, Missouri spent a per-pupil average of \$10,147. The state of New York spent the most per pupil at \$21,206, while Utah spent

only \$6,575 per pupil in 2015. These amounts were financed from local, state, and federal funds totaling \$642,600,000,000 in 2015. The 100 largest school districts in the United States educate 22% of the total student population. These school districts also have the lowest graduation rates and standardized test scores coupled with poor funding due to low property taxes (Teasley, 2017).

Students with disabilities have the right to a free appropriate public education. The IDEA was passed by congress in 1975 to ensure that school districts provide students with disabilities a free and appropriate public education in the least restrictive environment possible. In 1973, Missouri House Bill 474 passed authorizing special education services to all children from age 3 through 21 with eligible disabilities. In the state of Missouri an average of 13% of students enrolled in public schools are eligible to receive special education service (DESE, 2017). An increase in inclusive opportunities for students with disabilities in the United States can be credited to No Child Left Behind in 2001 and amendments made to the Individuals With Disabilities Education Improvement Act of 2004. Students with disabilities are granted the right to be educated in the least restrictive environment. Although students with disabilities are allowed in the public school building, it does not guarantee they are educated with nondisabled students and access to the public school curriculum (Gregory, 2018).

School funding and property taxes are connected in the United States with half of all property tax revenue funding public education. School funding has been seen as controversial and caused litigation across the states for 40 years. Some legislators believe public schools rely too much on the funding generated with property tax dollars and the

states should increase revenues provided to school districts. Others still consider effective government uses property taxes to fund local public schools (Kenyon, 2007).

A student's family socioeconomic status, measured by income and education level, has a great influence on a student's educational achievement (Buchanan, 2006; Fram, Miller-Cribbs, & Van Horn, 2007; Strenze, 2007). Parents who are educated and wealthy value academics and provide books, computers, tutoring, and cultural enrichment for their children even prior to the start of their schooling. Middle and upper class families often also attend schools in safer and healthier neighborhoods (Squires & Kubrin, 2005). Education has long played a vital role in the development of critical literacies and civic capacities. Educators must develop young people to have the capacity to think, question, imagine, and inspire. Students must be allowed to embrace their imagination, push their educational capacity, and understand their role in social responsibility (Giroux, 2017).

Schools often benefit from the wealth of families within their district boundaries. School districts with more funding generated from taxes can afford more materials for students, pay higher salaries for teachers, and have better facilities. These factors assist in higher student achievement and school prestige. With a majority of school funding coming from property tax, schools in wealthier communities with more expensive homes and businesses generate more funds (Vance, 2018). Wealthy schools are also able to provide more support and enrichment to students (Ushomirsky & Williams, 2015).

Students with disabilities from low socioeconomic families were shown in research by Meadan and Halle (2004) to more often work alone and enjoyed blocking or not accepting assistance. It was found that students with disabilities did not enjoy social

interaction with peers and had had negative experiences interacting with others; therefore to avoid this experience the students chose to work independently. This tendency to choose to work alone limits developing strong peer relationships. Students with disabilities from low socioeconomic families were also more prone to physically fight with peers because of problems with encoding social cues and behave with malice towards peers. The choice to not form relationships with most peers and an inability to understand social cues permit students to be aggressive toward others, have little self-control when frustrated, and form few friendships. Educators need to be aware of possible relationships between assessed valuation, socioeconomic status, and special education needs in order to best serve students.

### **Research Questions/Hypotheses**

The purpose of this study was to determine if there was a relationship between the percent of students identified as having a disability and the assessed valuation of the school district. Through the examination of data gathered from The Missouri Department of Elementary and Secondary Education web site for school districts, the following questions were answered:

1. What is the relationship between the assessed valuation of a school district and the percent of students with a disability within the school district among elementary and secondary schools in Missouri from 2012-2017?
2. What is the predictive power of students with disabilities in Missouri school districts from 2012-2017 on assessed valuations?

Based on the data collected during the research investigation, the following null hypotheses were tested:

H<sub>0</sub>1. There will be no statistically significant relationship between the assessed valuation of a school district and the percent of students with a disability within the school district among elementary and secondary schools in Missouri from 2012-2017.

H<sub>0</sub>2. There is no statistically significant predictive power of students with disabilities in Missouri school districts from 2012-2017 on assessed valuations.

### **Theoretical Framework**

The theoretical framework for this study was based upon Marx's conflict theory (Marx & Engels, 2008). Marx's development of this theory in the early 1800s produced this perspective. The conflict theory was chosen to support the importance of financial impact on education. This theory perceives the educational process as a method of upholding social inequality and conserving the power to those who dominate in society. People who believe in conflict theory see the mission of education is to assist in a continued status quo in an ordered society with lower class citizens serving as compliant workers. Conflict theorists see the educational system as training for the working class to accept their position as lower class society members. This is done through the education of students through a "hidden curriculum."

Conflict theorists believe the property taxes that are used to fund schools lead to inequality because predominantly White areas are usually more affluent and provide more funding for school districts. These school districts can afford to pay higher teacher salaries to attract better educators, new supplies, and technology. Students who graduate from these schools have advantages getting into better colleges and jobs. School districts

in lower socioeconomic areas are less likely to go to college and more likely to go into vocational or technical training and are usually minority students.

### **Limitations/Delimitations/Assumptions**

This research project is a correlation study using district level self-reported, preexisting data, therefore determining causation was limited. The research process contained limitations.

**Limitations.** The following limitations existed in the study.

1. Data were based on school districts collection method and means throughout the state of Missouri in the years 2012-2017.
2. The researcher was an educator in a school district meeting the criteria used in this inquiry.

**Delimitations.** The following delimitations existed in the study.

1. This research focused on data provided by school districts in Missouri from 2012-2017.
2. This research population was limited to special education child count numbers in the state of Missouri between the years of 2012-2017.
3. This research was limited to assessed valuation totals for school districts in the state of Missouri between the years of 2012-2017.
4. This research was limited to Marx's conflict theory perspective.

The researcher directly extracted data for the study from the DESE Web site and input them into Statistical Package for the Social Sciences (SPSS) in order to make comparisons between the variables. Following the examination of each school's assessed valuation, data were collected regarding students with disabilities child count for years

2012-2017. A correlation design was used in order to show the relationship between Missouri public school districts' assessed valuation and the number of students with a disability in the district.

**Assumptions.** The following assumptions existed in the study.

1. All data and reporting to the Missouri Department of Elementary and Secondary Education (DESE) from school districts were current and accurate.
2. Missouri data could be generalizable to other states with similar demographics.

According to the DESE Core Data and Missouri Student Information System (MOSIS) Reference Manuel (2018), the DESE MOSIS Data Collection component is a web-based application that allows for school districts to submit, correct, and certify data being reported. MOSIS Data Collection was built on the following assumptions:

- The reporting institution identified, collected, and maintained data required by MOSIS locally and could report those data to MOSIS.
- DESE had assigned unique identification codes for every district, school, and public postsecondary institution in Missouri.
- Every student had a unique MOSIS ID.
- Data collected by MOSIS was used for multiple purposes based upon state and federal laws, rules, and information needs.
- MOSIS data were used for populating portions of the Core Data System, state and federal reporting, accountability, and funding purposes.
- Data items may have been required, optional, conditional, or not allowed. Conditional data items were dependent upon value of other data elements. If an

optional data element was reported, it was validated and had to meet MOSIS business rules (DESE, 2018, pg. 289).

### **Design Controls**

This research included all school districts in the state of Missouri and compared each district's assessed valuation and child count of students with disabilities based on data provided from DESE. The research design was correlational in design nature; therefore the determining causation was limited. The data were examined for possible relationships between the assessed valuation of the school district and the count of students with disabilities. The information in this research can be generalized to compare to school districts in other states. In order to guard against researcher bias, the researcher did not include data from the researcher's current school district of employment. All data collected through the DESE web site had been reported by individual school districts without bias or influence of the researcher.

The variables for this research study were the various assessed valuations per Missouri public school district. The dependent variable consisted of student with disabilities counts per district collected from the DESE. The analysis of documents through the DESE Web site and literature published regarding fiscal spending was assessed in the creation of this research. The U.S. Department of Education, Office of Special Education Programs, and Missouri Department of Elementary and Secondary Education required timely and accurate district reported data in order to evaluate school districts (DESE, 2012).

## **Definition of Key Terms**

**Assessed valuation (AV).** The total value of all real and personal property in a school district as calculated by the county assessor minus tax-increment-financed valuation as of December 31 of the previous calendar year (Missouri Department of Elementary and Secondary Education, 2018).

**Assessed valuation per pupil.** The value of real and personal property in a school district divided by the average daily attendance. (Missouri Department of Elementary and Secondary Education, 2018).

**Dollar value modifier (DVM).** The differences to educate students based on the cost of living across the state, established by legislators. (Missouri Department of Elementary and Secondary Education, 2018).

**Expenditure per pupil.** A schools district's average current expenditure per pupil by the Average Daily Attendance calculation. (Missouri Department of Elementary and Secondary Education, 2018).

**Individualized Education Program (IEP).** The program designed and implemented to support the educational needs of students with educational diagnoses. The Individualized Education Program is a legal document that must adhere to federal and state mandates that students are placed in the least restrictive environment with modifications and accommodations relevant and required for the students to achieve their individualized education goals. (Missouri Department of Elementary and Secondary Education, 2018).

**Individuals With Disabilities Education Act (IDEA).** A federal law established in 1975, previously known as the Education for All Handicapped Children Act, and

reauthorized in 1997. (Missouri Department of Elementary and Secondary Education, 2018).

**Operating tax rate.** The total tax rate set by the district Board of Education in compliance with the tax rate ceiling. (Missouri Department of Elementary and Secondary Education, 2018).

**Property tax.** The revenue received by the school district from the tax rate set per \$100 of assessed valuation of real and personal property. (Missouri Department of Elementary and Secondary Education, 2018).

**Tax levy.** The amount levied on patrons of a school district by the government for the purpose of financing services performed for common benefit. (Missouri Department of Elementary and Secondary Education, 2018).

## **Summary**

This chapter provided a brief history of the need to examine the school district assessed valuation in the state of Missouri and its relationship to the child count of students with disabilities. The purpose of this study was to examine the relationship between the assessed valuation of school districts and the number of students with disabilities enrolled in the district. The Missouri Department of Elementary and Secondary Education data were used to determine the assessed valuations and students identified with disabilities within the Missouri school districts.

Chapter Two of this research will provide a review of the related literature, beginning with a brief history of assessed valuation and special education, the impact of funding on the cost of educating students with disabilities, and the relationship between assessed valuation within a school district and student learning. Chapter Three will

describe the method for gathering and analyzing school districts and their data in the state of Missouri. Chapter Three will also contain the state standardized test results for the school districts. Chapter Four will present the research findings. Chapter Five will provide a summary of the research and the importance of this study for future educational studies.

## CHAPTER TWO

### REVIEW OF LITERATURE

#### **Introduction**

The way educators instruct students must be as ever changing and innovating as the world in which students live to allow for their success following graduation. As the world changes so do the demographics of the students within our school systems. Even though school districts are separated into districts based on geographical land divisions, the families that make up those common areas may be extremely diverse. Poverty has a great impact on the educational results for students (Park, Turnbull, & Turnbull, 2002).

School districts cannot control the economy of the community they serve. Researchers have shown schools possible modifications to help students from low socioeconomic families achieve. Some feel the way our current education system is designed, we are failing our students (McGee, 2004). Schools continue to look for better ways to serve and educate, as it is the students that make up our future. Since the release of *A Nation at Risk* in 1983, the United States has been focused on our school system's accountability, which has impacted even individual classrooms. Through the use of public descriptions and grades of public schools, educators have become accountable to community taxpayers for the learning occurring in their classrooms (Loveland, 2012).

With so much attention focused on testing and not on poverty, inequity, and early childhood education, public education will continue to struggle even with the Every Student Succeeds Act (ESSA). Since 2013, the majority of students in the United States public schools have been classified as low income. Without changing the way academic

performance is monitored, ESSA will not improve achievement gaps and labeling schools with high poverty populations as low achieving (The Conversation, 2015).

### **History of Assessed Valuation**

The first documented taxing of property started in 596 B.C. with a tax levy on all property within Athens. The Romans applied these property taxes to both real and personal property (Jennings, 2005). The relationship between education and government in the United States began in 1642 when Massachusetts law required children to be taught how to read. The Ye Old Deluder Law enacted by Massachusetts legislature in 1647 followed soon after and ordered towns of more than 50 residents to appoint and provide wages to a teacher for the town. Towns with 100 or households were required to provide a grammar school that could prepare students for possible continued education at a university. When towns did not comply with the Ye Old Deluder Law, they were faced with fines enforced by the government. This established educational accountability and the process of levying taxes to assist with financing public education (Alexander & Salmon, 1995).

In 1789, the Constitution ratification declared the rights of individual property over the concept of community ownership. The 14<sup>th</sup> Amendment granted the right to have private property ownership as part of life, liberty, or property without the due process of law. The Constitution also granted permission to Congress to levy and collect taxes on property. Close to 85% of real property taxes currently collected provide revenues for local government expenditures (Sirmans & Sirmans, 2012).

Local property taxes served as a primary source of funding public school districts until the 1920s when a majority of states began providing revenue to schools based on

student enrollment. This new source of revenue continued through the 1930s until World War II ended and foundation formulas started. These local property taxes can account for close to 78% of local funding provided to schools. In most states, public school districts are allowed to levy their own taxes and collect them based on the district budget (Kent & Sowards, 2009).

In 1945, the state of Missouri established the current State Tax Commission through the Missouri Constitution. Article X, Section 14 of the Missouri Constitution requires the General Assembly to establish a tax commission in order to perform three functions:

1. equalization of assessment as between counties,
2. to hear appeals from local boards of equalization in individual assessment cases, and
3. to perform such duties as may be prescribed by law (State of Missouri State Tax Commission, 2018).

The Commission is composed of three members (from the two major political parties) appointed by the Governor with assistance from the Senate. Members of the Commission hold staggered 6-year terms. Through the Missouri Constitution, the State Tax Commission can require all real and tangible personal property to be assessed and given a value or percentage of a value that is established by law. Prior to 1979, this law was not enforced and was not uniform around the state (State of Missouri State Tax Commission, 2018).

The Missouri Supreme Court case of *Cassilly v. Riney* in 1979 addressed the lack of uniform system of assessment in St. Louis County. The Supreme Court stated that the

State Tax Commission had the power and responsibility to resolve assessments throughout the entire state. This was the first time the State Tax Commission had a favorable ruling to enforce the authority it was granted in the Missouri Constitution. This verdict by the Missouri Supreme Court led to the reassessment statewide and implementation of our current tax system in 1985 (State of Missouri State Tax Commission, 2018).

On November 4, 1980, a businessman from Springfield, Missouri, began a petition in support of a constitutional amendment that would limit the state and local government taxation and spending, which was adopted by the voters. This amendment is generally known as the Hancock Amendment after advocate Mel Hancock, who served as a member of the United States House of Representative of Missouri's 7<sup>th</sup> Congressional District from 1989-1997 (Myers & Hembree, 2004). The amendment is patterned after a constitutional condition adopted by Michigan voters in 1978 known as the Headlee Amendment. While Missouri courts have decided several cases inferring various versions of the Hancock Amendment, none of the decisions have been based on what Michigan courts have placed on the Headlee Amendment, which are substantial adjustments from Missouri decisions (Myers & Hembree, 2004).

Found in Article X Sections 18-24 of the Missouri Constitution, the Hancock Amendment contains three limitations:

1. The state revenue limits and tax refund provision—Section 18(a) limits the amount of taxes the General Assembly may impose through a ratio calculation.

2. The state mandate provision—Sections 16 and 21 prohibit reduction of state funding for local services or requiring local government to have additional services without the state funding the cost.
3. The local government tax limit and voter-approval provision—Sections 16 and 22 require a tax limit and voter approval before a new levy can be imposed (Myers & Hembree, 2004).

### **Marx Conflict Theory**

Conflict theorists believe the educational system reinforces the social inequalities of a class system that allows for people of low socioeconomic status to obey the power of the upper class society. Students of low socioeconomic status, even with high academic levels and motivation, cannot afford the same learning opportunities that students of high socioeconomic status can afford. Low socioeconomic students may have to be employed, lack technology at home, and assist financially to the family, babysit family members, or have a poor study environment. Conflict theorists also believe education promotes the hidden curriculum, which is the nonacademic learning students acquire informally through the environment. This reinforces the positions of higher socioeconomic status and inequality (Allan, 2013).

Goar (2018) believed the use of tracking in our education system is also a way conflict theorists see inequality. When students are divided and grouped according to academic ability, this allows for more individual attention from instructors. Conflict theorists see tracking as working up to or falling down to social expectations. Schools also train working class students to accept their positions and participate in vocational training rather than offering dual credit to prepare them for college. The educational

system also uses IQ testing, which conflict theorists see as a test of cultural knowledge more than academic intelligence of students. The lack of exposure to cultural experiences limits students of low socio economic backgrounds and promotes maintaining the established power/class structure.

Marx's conflict theory assesses society through a group domination lens depicting social order as being achieved through the dominance of one group over others. Change is welcome, but ensues when a subordinate group overthrows the dominant group. This allows for quick, yet disorderly and forceful change. Marx also believed that history is a series of class struggles with class conflict bringing about change. How the conflict between classes begins and progresses leads to the effect it brings. Marx believed that concern of class conflict through the deprivation leads to class consciousness that creates conflict and social change. He felt the working class through rising levels of education and concentration of workers would realize this through the structural demand of capitalism (Kretchmar, 2018).

### **Assessed Valuation and Socio Economic Status**

Since the Coleman Report (Coleman et al., 1966), research has sought a relationship between student achievement and educational funding. In 2007, research by Stringfellow examined the relationship between student achievement and educational spending in Rhode Island. Although Stringfellow's research found no correlation between educational spending and students' achievement, there was a connection between the assessed value of an area and the student achievement levels. Stringfellow determined that with an increase in school spending, there was not an increase in student achievement. However, school districts with a high level of assessed value did have a

correlation with higher student academic achievement and school districts of lower assessed value possessed lower student achievement (Stringfellow, 2007).

Only one third of the 5,500,000 students with a disability were receiving an adequate education in 1966 according to a congressional report (National Center for Education Statistics, 2018). The remaining students with disabilities were either excluded from school entirely or were waiting to reach the age of 21 and “age out” of the public education system. In the latest report from the Office of Special Education to Congress in 2012 only 5% of students with disabilities were educated outside the regular public school district and 62% were in regular classrooms more than 80% of the day (Samuels, 2015). President Ronald Reagan in the 1980s blamed low-performing schools on poor teachers and lazy students. The social perception became that educational performance could be easily associated with the percentage of minorities and low socio-economic students within the school district. These factors led to the increase of private and charter school systems allowing school choice for students (Teasley, 2017).

The often times imbalanced differences in school district funding levels across the United States stem from the combination funding sources of federal, state, and local revenue (Hanushek, 2006). The variance in property taxes that makes up local revenue within the states shows the consistent differences in the properties within the school districts. Even with state government revenues of equal values, property-wealthy communities can easily spend more per student than less wealthy community school districts. Students who lived in local wealthy school districts would have easier access to better resources than those students living in a lower level of local wealth, as would teachers whose salaries are paid with district revenues.

In 2007, Rebell continued Hanushek's (2006) research and concluded that a student's achievement within the school system is influenced by factors outside the system. Original research involving a study of variance in student academic achievement conducted by James Coleman and associates referred to as the Coleman Report (Coleman et al., 1966) found that demographic factors such as socioeconomic status of an individual, school, and community had more of an effect on student achievement than the resources provided by the school district. Coleman and his associates concluded that even spending equal amounts per-pupil, school districts could not make up for the disadvantage students from low socioeconomic backgrounds had in comparison to students with wealthier households. Marchant, Paulson, and Shunk (2006) also found a strong relationship between the local property wealth of school districts and the student's socioeconomic status. School districts within lower assessed valuations of property would be required to maintain a considerably higher property tax rate in order to reach a comparable level of per-pupil spending. Carl (2005) stated that school districts with residential and commercial property had higher assessed valuation per pupil than agricultural property.

Weimer and Wolkoff (2001) suggested higher assessed valuation per pupil rendered higher socioeconomic families who possessed a value of education to encourage and support student academic achievement. This same individual achievement translated into overall academic achievement for the entire school district. Weimer and Wolkoff also discovered an association between the assessed valuation of the property within a school district and the academic achievement of its students as positive. A study developed by Haurin and Brasington (1996) indicated the connection between school

district quality and real estate prices. When controlling the variance in housing quality, the highest factor in housing prices was school district quality based on the standardized proficiency test pass rate. Research from Barrow and Rouse (2000) suggested that higher per-pupil spending rates led to an increased assessed valuation of the personal property within the school district. A study in West Virginia added that not only do smaller school districts do a better job educating students of poverty, but also larger schools better educated more affluent students (Bickel & Howley, 2003).

The ability for school districts to retain and develop teachers not only affects the student achievement in a school district, but the morale and overall school climate (Dieker, Hynes, Hughes, Hardin, & Becht, 2015). In school districts that are high poverty, minority, urban, and rural, mentoring programs have assisted in the retention of teachers. In districts where this need cannot be met within the school district support, e-mentoring has been used. E-mentoring allows for teachers to collaborate with other teachers and organizations to address concerns and share ideas (Bondie, 2015).

Rural school districts face many challenges that cannot be addressed for solutions by the district itself. According to Fishman (2015), close to one fifth of American students live in a region classified as rural and of those students 1 in 4 live in poverty. During closer examination, 48 of the 50 United States counties with the highest child poverty rates are considered rural regions. Rural communities also face the struggle of losing some of the most ambitious, talented, well-educated community members to urban areas where more financially beneficial job opportunities await. This unfortunate reality leaves rural areas with fewer possibilities of making changes or inspiring future successful high school graduates to return and make an impact.

Lutz (2008) contended that districts with a greater assessed valuation per pupil had the ability to spend more per pupil at an equivalent real estate tax rate as opposed to districts with a lower assessed valuation of property. Lutz also suggested that wealthier households exhibited a higher tendency to utilize services offered by school districts than low socioeconomic households. A study by Duncombe (2007) found that taxpayers of a higher socioeconomic class accepted higher tax rates, understanding that revenues would benefit the school district. Taxpayers in New York who were referenced as above average financial status approved increased taxes that led to higher spending per pupil in the schools.

Local tax effort is required by some states, such as Missouri Statue 167.126, RSMo. and calculated each August by school districts. Property taxes represent three fourths of the local tax amount collected and of that amount 95% of the tax revenue goes to local school districts (Lutz, 2008). The wealth of a community determines the local tax effort, which can lead to great discrepancy between districts. Research by Ogle (2007) showed that property-poor districts had to receive increased funding amounts from state sources at a higher rate than property-rich districts, which collected more from local taxes. The assessed valuation is defined as the total assessed property value of the school district minus the tax valuation as of December 31 (Missouri Department of Elementary and Secondary Education, 2018).

Research by Kenyon (2007) on property taxes and school funding established these myths and realities of property taxes and school funding:

**Myth 1:** School funding litigation reduces reliance on property taxation.

**Reality:** School funding litigation has not significantly reduced reliance on

property taxation for more recent court mandates or for states that replace local property taxation with state property taxation.

**Myth 2:** Property-poor school districts are also low-income districts.

**Reality:** Communities with low per-pupil property values may be high-income communities just as communities with high per-pupil property values can be low income.

**Myth 3:** The property tax is a regressive tax.

**Reality:** Researchers agree the property tax is not generally regressive, and, to the extent that it is a tax on capital, can be progressive. Furthermore, the property tax is more progressive than the sales tax.

**Myth 4:** Property tax rates are a reasonable measure of property tax burden.

**Reality:** Property tax rates are not a good measure of property tax burden because high tax rates can reflect a high level of local government services or restrictive zoning practices rather than low fiscal capacity; high tax rates can also reduce house prices, which partially compensate new homeowners for high taxes.

**Myth 5:** Reducing reliance on property taxation is usually beneficial.

**Reality:** There are advantages to relying on property taxes; they provide stable revenue and promote local fiscal autonomy and civic engagement, among other virtues.

**Myth 6:** State Supreme Court school finance rulings rely directly on the language of state constitutions.

**Reality:** No direct relationship exists between constitutional language and state Supreme Court school finance rulings; court mandates have differed markedly in two states with nearly identical constitutional language.

**Myth 7:** School funding litigation has been a generally effective means of improving education outcomes.

**Reality:** Researchers generally find court-mandated school finance restructuring reduces within-state inequality in education spending per pupil, but they do not find a consistent impact on the level of school spending or on student achievement.

**Myth 8:** State aid for schools is one form of property tax relief.

**Reality:** State aid for schools may or may not provide property tax relief, depending upon how it is structured. State-funded circuit breakers are more likely to achieve that relief.

**Myth 9:** State policy makers should aim to provide more than half of total K–12 funding.

**Reality:** State policy makers should not aim to provide any specific percentage of the total funding for K–12 education. Better policy goals focus on student achievement or limiting property tax burdens to some percentage of household income (Kenyon, 2007).

This trend is quite pertinent to Marx’s conflict theory, which validates that the group in power or students of a higher socioeconomic status have access to resources and opportunities that low socioeconomic students do not have. It is social class of students

that determines the quality of the educational institution and consequently future success (Omer & Jabeen, 2016).

### **Achievement and Socioeconomic Status**

Education is a key component to future success for students who are raised in families of low income. Research by Tavernise (2012) explained that when high-income children begin school, they have already spent 400 more hours than poor children in literacy activities. As children of low socioeconomic homes are more likely to be headed by single parents, the focus is more devoted to making ends meet and paying bills rather than engaging in athletics, music lessons, tutors, and other activities. Children of low socioeconomic homes are less likely to experience educational trips to the library or museum, or to have money to spend on the purchase of books or educational materials. Often these children are allowed to watch hours of unregulated television with little formal social interaction (Lam, 2014). Research by Park et al. (2002) found that families living in poverty have fewer opportunities and finances for family play, exercise, and socialization in recreational activities. Although the cost and time for participation in these activities are affordable, most families living in poverty use the unstructured time smoking and heavily drinking.

Upon his study of the impact of socioeconomics, expenditures, school size, and student achievement, Diaz (2006) found that not only was socioeconomic status a predictor of student future achievement, but a district's community involvement also influenced student academic success. Students used in the research that were identified in the 60-91% socioeconomic status level were statistically much lower on student outcome assessments than students with a better socioeconomic status. During the early

1950s-1960s, much of the research and concern focused on the educational gap between Caucasian and African American students, which has narrowed over time (Tavernise, 2012).

This unfortunate trend in the nation's economy has created another boundary in which schools must deal with the consequences of poverty in educating their students. Research from Hernandez (2012) and Park et al. (2002) stated that students who live in low socioeconomic families are more likely to have not only lower reading levels on assessments but they also start primary school with verbal and math skills well below those of middle class students. Additionally Hernandez concluded that students living in high poverty situations typically do not begin their education at the same level as their higher income peers academically or socially. Higher income families are more likely to expose their children to activities such as health screenings and educational family vacations than lower income families can afford. Hernandez found that students from poverty have an average of 2.1 fewer years of schooling and have a 34% higher dropout rate than the national average of 17.3%.

Based on the theory that socioeconomic status plays an integral role in a child's education, in order for a school district to be successful, it must make certain adaptations. A recent study conducted by Tilley (2011) examined the factors that allow high-poverty schools to achieve student academic success. Based on the findings, school systems are able to achieve academic success if educators implement collaboration and well-planned small group instruction, have high expectations of staff and student performance, invest in a school culture that is rich in caring and school pride, and find ways to implement as many supplemental support factors as financially possible.

Schools in rural areas rely on community members who value education enough to approve bond issues, which require them to pay high property taxes in order for school districts to have the funds to meet the needs of the students. Often times, low socioeconomic districts face the hurdles of not only poverty but low adult education levels of the parents in the district and lower property taxes, which does not allow school districts the funds necessary to educate their students (Diaz, 2006). When such hurdles continue over time, students will not graduate college or be career ready, and the circle of poverty will most likely continue for that area.

There are four different types of funding formulas used by public schools in the United States.

1. Foundation program: A guaranteed state amount based on per-pupil expenditures through state and local funding.
2. District power equalization: Districts are provided with state funding that is varied based on tax rates.
3. Full state funding: All school districts are fully funded by the state.
4. Flat grants: These state-funded grants provide school districts with an amount of funding per unit (per pupil, teacher, classroom; Verstegen, 2016).

Of the 50 states, 37 states including Missouri use the foundation program to fund the public school systems. Another nine states use the foundation program combined with another tiered system to fund basic public education. The foundation formula is usually paired with a local tax rate drawn from property taxes in the public school district.

Unfortunately school districts located in property-poor areas generate less revenue than property-wealthy school districts.

Verstegen's (2016) research proved states also provide additional funding based on the number of students who have disabilities, English language learners, low income/poverty, and gifted. Missouri provides additional funding for school districts based on the number of students with disabilities through per-pupil weighting. The 21 states that provide per-pupil/weighted funding for special education use either a single weight to calculate special education aid or use multiple weights based on the student's disability. Thirty-seven states including Missouri also provide additional funding to school districts to assist with educating students identified as at risk or living in poverty. These students are identified by their qualifying for federal funded free and reduced priced school meals.

Research by Omer and Jabeen (2016) examined the conflict theory, which linked the education system to the economic system. Our education system strengthens the instilled class system through reinforcement of the upper and lower class. The education bolsters this through the two types of school systems developed: public education and private education. Those who cannot afford the tuition costs of private school send their students to the common school of the masses where more of the "working class" is developed. Students whose parents have more resources and are able to afford private school maintain status quo for the elite or upper class.

### **Socio Economic Status and Special Education Needs**

Special education allows educators to adapt instruction to meet the individual needs of students with disabilities. In 1975, Congress enacted the Education for All Handicapped Children Act, Public Law 9-12, which supports state and local governments protecting the rights of children with disabilities from infant to young adult. The law

paired with the IDEA (Public Law 108-446), has protected the civil rights of students with disabilities, ensuring equal access to education and services for over 6,000,000 children and another 320,000 infants with disabilities (U.S. Department of Education, 2018).

This is the U.S. Department of Education's stated purpose of the IDEA:

- to ensure that all children with disabilities have available to them a free appropriate public education that emphasizes special education and related services designed to meet their unique needs and prepare them for further education, employment, and independent living;
- to ensure that the rights of children with disabilities and parents of such children are protected;
- to assist States, localities, educational service agencies, and Federal agencies to provide for the education of all children with disabilities;
- to assist States in the implementation of statewide, comprehensive, coordinated, multidisciplinary, interagency system of early intervention services for infants and toddlers with disabilities and their families;
- to ensure that educators and parents have the necessary tools to improve educational results for children with disabilities by supporting system improvement activities; coordinated research and personnel preparation; coordinated technical assistance, dissemination, and support; and technology development and media services;
- to assess, and ensure the effectiveness of, efforts to educate children with disabilities.

Since November 29, 1975, IDEA has changed the way we educate students with disabilities. The federal government only funds a portion of the bill that served more than 6,000,000 students with disabilities, but that portion alone totaled 11,500,000,000 dollars. The cost of educating a student with a disability is almost twice the cost of a student without a disability. When IDEA was established, Congress felt that by 1982 the federal government would pay for 40% of the additional cost to educate students with disabilities. Later the 40% was amended to a funding goal rather than a requirement. As of 2015, the federal government only provided revenue for 16% of the cost to educate students with disabilities (Samuels, 2015).

Missouri Statute 162.670, which went into effect August 28, 2002, states the following:

In order to fully implement Section 1 (a) of Article IX, Constitution of Missouri, 1945, providing for the establishment and maintenance of free public schools for gratuitous instruction of all persons in this state within ages not in excess of twenty-one years as prescribed by law, it is hereby declared the policy of the state of Missouri to provide or to require public schools to provide to all handicapped and severely handicapped children within the ages prescribed herein, as an integral part of Missouri's system of gratuitous education, a free appropriate education consistent with the provisions set forth in state and federal regulations implementing the Individuals with Disabilities Education Act (IDEA) and any amendments thereto. The need of such children for early recognition, diagnosis and intensive educational services leading to more successful participation in home, employment and community life is recognized. The timely implementation

of this policy is declared to be an integral part of the policy of this state (Missouri Legislature Statute 162.670, 2002).

### **The Missouri IEP Process**

Under Missouri Special Education Law (DESE, 2018), the IEP team may qualify a child for special education and related services if the child has one of the 13 disability categories of special education noted below and it must adversely affect their educational performance:

- Autism
- Deaf/Blind
- Emotional Disturbance
- Hearing Impairment and Deafness
- Intellectual Disabilities
- Multiple Disability
- Orthopedic Impairment
- Other Health Impairment
- Specific Learning Disability
- Language Impairment
- Sound System Disorder (Articulation and Phonology)
- Speech - Fluency
- Speech - Voice
- Traumatic Brain Injury
- Visual Impairment/Blindness
- Young Child with a Developmental Delay

Currently approximately 6,400,000 students have been identified as having a disability, with the largest percent of students being placed in the disability categories of learning disabilities and speech and language impairments. The disability categories of autism and other health impairment are the fastest growing. Roughly 779,000 students have been identified as other health impaired an increase of 93% over the last 10 years. The number of students identified as autistic has risen to 498,000, a 263% increase in the last 10 years (Samuels, 2015).

The Missouri State Plan for Special Education under Part B of IDEA details how students are identified, tested, and served by school districts. Students must need specialized instruction and be found to have a disability before an IEP can be developed and special education and related services may start. This six-part process includes the following steps:

1. Child Find — School districts are required to identify, locate, and test all students with disabilities within the district including students attending private schools or homeschooled. Child Find activities include multiple notifications sent into the community making parents aware of the services provided by the school district (DESE, 2018).
2. Request for Initial Evaluation and Referral—A school district staff member or a parent may make a request for a student to be tested for a disability. Following the request the school district has 30 days to determine if the student needs to be tested for a disability (Review of Existing Data) or refusal of testing (DESE, 2018).
3. Review of Existing Data—The IEP team reviews information gathered and

determines if more data are needed to determine if the student qualifies for special education services. If more data are required, the student will undergo testing (DESE, 2018).

4. Evaluation—Following parental permission, the student is tested to determine if the student qualifies for special education services (DESE, 2018).
5. Eligibility Determination—The parent/guardian meets with the IEP team to see if the testing results define the student has a disability by the Missouri State Plan for Special Education standards. If the team cannot come to an agreement on the student’s eligibility, the school district must make the final decision (DESE, 2018).
6. The Individualized Education Program (IEP) — If the students is determined to be eligible for special education services under one of the categories of IDEA and the Missouri State Plan, an IEP will be developed to meet the needs of the individual student (DESE, 2018).

### **The Relationship Between Poverty and Students With Disabilities**

Although the United States is said to be one of the richest nation’s per capita wealth in the world, it also has the highest discrepancy in youth poverty rates. Globally students with disabilities are faced with low standards of living, and high levels of discrimination and inequality. There is not a common definition of special education for students internationally. The lack of this global definition makes it difficult to compare and find consistent factors for all students with disabilities in our world (Enwefa et al., 2006).

Research by Ushomirsky and Williams (2015) generalized across the United States, school districts with the highest poverty rates received 10% less per student in state and local funding. Public education stating there are inequities in funding, which are the foundations of all inequities in our school system. Federal dollars are tied exclusively to provide additional services to students of poverty, English learners, and students with disabilities. Low socioeconomic public school districts across the United States received \$1,200 or 10% less per student in state funding according to Ushomirsky and Williams. In other words, in a 500-student public school district, there may be a \$600,000 per year funding gap. Ohio and Minnesota are the best states at providing additional funding at the state and local level to high-poverty school districts. Illinois is the worst state in the United States to provide additional needed state and local funding to high-poverty school districts. Schools in the state receive 20% less in state and local funding. Missouri is in the lower one third of providing needed additional funding to high poverty school districts (Ushomirsky & Williams, 2015).

Studies have shown a strong relationship between students raised in poverty and the risk for a disability (Fujiura & Yamaki, 2000). Research from Fujiura and Yamaki (2000) showed an increase in student disability rates among students living in homes meeting the poverty guidelines. Socioeconomic status also has a great impact in early learning disabilities and outcomes. Jensen (2009) found that students from poverty often times had a worse prognosis than students with similar disabilities in middle class homes. The U.S. Department of Education (2018) stated in the 19<sup>th</sup> Annual Report to Congress on IDEA that childhood poverty was cited as one of the five central educational

challenges to educational service delivery. As childhood poverty has increased, so have the number of students with disabilities requiring special education services.

It can cost a school district up to 40% more to educate a student who lives in poverty and this probably an understatement. Studies have shown it costs twice as much or more to educate students of poverty to the same standards (McMahon, Parnes, Keys, & Viola, 2008). McMahon et al. (2008) also found student with disabilities who had more resources had fewer school-related stressors and higher levels of school belonging. These factors also lead to higher levels of academic efficacy and school satisfaction, and lower depression rates. States are responsible for making sure schools have comparable funding no matter the wealth of the school district. The establishment of state funding formulas that take into account district enrollment, students with special needs, and students living in poverty to even out funding among public school districts would be of benefit to all. This political process of funding is not always perfect and even with the assistance of fair funding formulas, there is no guarantee the state will have the money to fully fund the formula (Podgursky, Smith, & Springer, 2008; Pristoop, Lui, Roza, & Wiener, 2006).

Wilgosh and Scorgie (2006) found in the research of students with disabilities living in poverty those students with disabilities who have families with higher incomes have more choices. Families with higher incomes are able to find more resources and show a higher paternal and maternal satisfaction than families living in poverty. Students with disabilities have additional costs for therapy, special child care, and home modifications (Parish, Rose, Grinstein-Weiss, Richman, & Andrews, 2008). Hartline-

Grafton (2017) found that exposure to environment hazards of poverty leads to student disabilities and the financial burdens of caring for the disability lead to increased poverty.

Research conducted by Regional Educational Laboratory Mid-Atlantic (2015) with Epstein focused on what engaged parents of students with disabilities do differently. Her research found that equal valued partnerships between family, school, and community allow for the greatest academic support for students with disabilities. Whether the student with disabilities is served in the special education classroom or is placed in the mainstreamed classroom, the parents/guardians must feel at ease in the school and treated with the same respect as parents of nondisability students. In low socioeconomic school districts where parents might be immigrants, underemployed, or struggling financially, schools may have to work harder to assist parents in feeling represented and assist with finding resources (Regional Educational Laboratory Mid-Atlantic, 2015). The inequity in public school funding needs to be resolved in order for all students across the state to access the resources they need to have academic success. School districts with high percentages of low socioeconomic status students need additional funding to purchase resources to assist in the educational process.

According to Carey's (2002) previous research, not only do low-income students start behind their high-income peers in kindergarten, but also in college enrollment, test scores, and graduation rates. Although 38 states have made efforts to provide more educational funding to districts with a high population of low socioeconomic students, the national poverty rate has continued to increase, making the gap almost impossible to overcome. Research has shown that not only do school districts with low socioeconomic status lack computer equipment and Internet access in comparison to high socioeconomic

districts, but students who make up low socioeconomic districts lack computer equipment and Internet access at home as well, thus limiting the familiarity, skills, and comfort necessary to perform on a computerized state-standardized assessment (Warschauer, 2007).

Holding all students and schools to the same standards based on student achievement on standardized state assessments requires everyone to meet the same expectations. Wallenstein (2012) maintained that not only does the use of standardized testing not take into account a student's background or demographics, standardized testing also cannot measure the effects schools may be having on a student from a low-income family. Dickinson and Adelson (2014) focused on kindergarten students to test the impact of low socioeconomic development on academic progress. Kindergarten students have the least amount of formal schooling, and their performance would be based almost strictly on any educational development that the family would have introduced prior to the students schooling.

It is also important for educators to incorporate activities that allow for parental involvement at the school. Not only does parental involvement allow for teachers to gain a better understanding of the family makeup of the students, but reinforces the efforts of parents to be involved with their children's education (Smith, 2006). Jensen (2009) found that the often overcrowded homes with the worries of utility shutoffs and insufficient heat or cooling add to the disruption of rest or ability to do homework for students who live in poverty.

The impact of poverty and learning disabilities on a student's ability to receive the best education possible can be detrimental. Although public school systems work to

provide an equal education to all students, socio-economic struggles still impact education. As the early work of Marx although politically charged, pointed toward class struggles and its impact on history, education must adapt to educate all students. Change is both inevitable and good over time (Kretchmar, 2018).

## **Summary**

Property taxes produce funding revenues to support public school districts. School districts located in impoverished communities cannot provide an adequate education without assistance from other sources, especially to students with disabilities. Although it is impossible to expect assessed valuation taxes to provide equal revenues given the vast differences in property values across public school districts, making sure school districts can provide quality education to students with disabilities needs to be examined. Finding ways to expand revenue to impoverished public school districts in order to guarantee a quality education to students across the state should be a continued focus for state governments (Youngman, 2016). The publicly funded United States education system demonstrates the inequality among students from higher socioeconomic backgrounds and students of low socioeconomic status. The high socioeconomic status or background of a student may grant privilege, but the way the student interacts with the school system will determine their success. Vance (2014) stated the school environment, privileged or disadvantaged, impacts if graduates will attain an equal education. Resources are allocated to school districts as well as beliefs, values, and attitudes, all of which influence the school district system and structures. The purpose of this study was to identify the nature of the relationship between assessed valuation and the number of

students with disabilities in Missouri School Districts and address a possible link between the two.

## CHAPTER THREE

### RESEARCH DESIGN AND METHODOLOGY

#### **Introduction**

The purpose of this study was to determine the nature of the relationship between the number of students identified as having a disability and the assessed valuation of the school district. This study used open access, descriptive data gathered from The Missouri Department of Elementary and Secondary Education Web site for public school districts. The data from 2012-2017 were used to determine the assessed valuation of public school districts and the students with disabilities child counts. Data were then examined to find if a relationship between these two factors existed.

Using the data from The Missouri Department of Elementary and Secondary Education Web site, school districts were examined based on 2012-2017 school years' assessed valuation and students with disabilities child count. The districts were not identified by school district name or school district code. All data collected from The Missouri Department of Elementary and Secondary Education Web site were public information.

#### **Research Questions/Hypotheses**

The purpose of this study was to determine the nature of relationship between the percent of students identified as having a disability and the assessed valuation of the school district. Through the examination of data gathered from The Missouri Department of Elementary and Secondary Education Web site for school districts, the following questions were addressed:

1. What is the relationship between the assessed valuation of a school district and the percent of students with a disability within the school district among elementary and secondary schools in Missouri from 2012-2017?
2. What is the predictive power of students with disabilities in Missouri school districts from 2012-2017 on assessed valuations?

Based on the data collected during the research investigation, the following null hypotheses were tested:

- H<sub>01</sub>. There will be no statistically significant relationship between the assessed valuation of a school district and the percent of students with a disability within the school district among elementary and secondary schools in Missouri from 2012-2017.
- H<sub>02</sub>. There will be no statistically significant predictive power of students with disabilities in Missouri school districts from 2012-2017 on assessed valuations.

### **Research Procedures**

Public school districts in the state of Missouri were examined based on data collected in the Missouri Department of Elementary and Secondary Education Web site. Lists of all school districts in the state of Missouri with assessed valuation numbers were examined. These lists were then cross referenced with a list containing the number of students with disabilities child count list. From this list, schools districts were compared based on data collected from the DESE Web site on each district's 2012-2017 data of assessed valuation and student with disabilities child count. In accordance with Southwest Baptist University guidelines related to the protection of human participants, a

Research Review Board (RRB) review request was submitted for approval for this study. Following RRB approval, data collection through the Department of Elementary and Secondary Education Web site began. The data collected from the DESE Web site was open access data and did not require any permission from DESE.

### **Research Design**

The researcher directly extracted data for the study from the DESE Web site and input them into SPSS in order to make comparisons between the variables. Following the examination of each school's assessed valuation, data were collected regarding students with disabilities child count for years 2012-2017. A correlation design was used in order to show the relationship between Missouri public school districts' assessed valuation and the number of students with a disability in the district.

### **Sampling**

This study examined a total population sampling by using the data for all public schools in the state of Missouri with the exception of the researcher's district. This total sampling allowed for a well-balanced sample large enough to make generalizations. Total population sampling allows for characteristics to be exposed that are not common, but to ensure that a valid estimate of a generalized relationship between variables has been obtained (Laerd Dissertation, 2012). Using data for all public schools in the state of Missouri also allowed for a large enough population to made generalizable conclusions from the study. Conclusions from the study would also be generalizable for other states as well.

## **Instrument**

The researcher used the open access data on The Missouri Department of Elementary and Secondary Education Web site to collect data for the public school districts in the state of Missouri. The database had open access and was available to the public. Use of the database as an instrument was appropriate, as it included all data collected from every school district in the state, and was verified for validity and reliability by DESE via the MSIP evaluation process. School districts were sorted by assessed valuation from 2012-2017 from the lowest assessed valuation to the highest assessed valuation. After the schools were ranked by assessed valuation, each of the schools was ranked a second time by the number of students with disabilities. These data were reported to DESE by each Missouri school district as part of the December core data cycle. School districts that were identified as K-8 school districts and charter, parochial, and private school districts were not used in this study. Only Missouri public schools with a kindergarten through 12<sup>th</sup>-grade student enrollment were used in this study.

In order to analyze the relationship between assessed valuation and number of students with disabilities, a Pearson correlation coefficient was used. The Pearson's  $r$  formula for the correlation coefficient was appropriate because it measures the strength and direction of linear association between two variables, in this case between a district's assessed valuation and the percentage of students with a disability. The researcher sought to determine the strength of the relationship based on a significance level of .05.

Core Data and MOSIS are data collection systems managed by the Office of Data System Management at DESE. The Core Data System is a data collection system that

consists of integrated screens used to directly enter or update information from school districts. Data in several Core Data screens are now directly populated from files submitted in the MOSIS data collection system. Data collection is an important way to gauge student achievement within Missouri's public school districts, and it is one of multiple measures the state uses to determine performance. Missouri has collected student performance data since 1989.

There are two components of MOSIS: the ID Assignment component and Data Collection component. The ID Assignment system maintains a unique ID for every student receiving educational service in Missouri public schools. The MOSIS data collection system gathers information at the individual level and derives from these data the counts needed for aggregate reports. School districts report data items in Core Data and MOSIS in six cycles during the year: beginning-of-the-year items in the August and October Cycles; midyear items in the December, February, and April Cycles; and end-of-the-year items in the June Cycle. MOSIS also collects data apart from these six cycles such as the Assessment Pre-Code data.

As the originators of the data, districts (and their schools) are responsible for the quality, completeness, and timeliness of the data. Districts must provide guidance to schools on how to record data and how to submit the data to the district, and monitor the schools to be sure the data are submitted on time and in the correct format. Districts are required to adhere to the reporting requirements of the DESE. Districts are also responsible for identifying where corrections to their data are needed and completing the steps needed to get the data changed both in their own systems as well as in MOSIS. Districts using the MOSIS Data Collection System will upload information and resolve

edits presented to them. Upon the resolution of the edits the district has the opportunity to certify the data. Certification indicates the district wants DESE to use the data to fulfill the collections requirements.

### **Human Participants**

In accordance with the guidelines of Southwest Baptist University a request for review was submitted to the RRB for approval to conduct this study. After receiving RRB approval, data collection began. School districts were not identified by district name, all participants remained anonymous, and all data gathered remained confidential, thus potential risks associated with participation in this study were minimal if any.

### **Data Analysis**

Following the collection of the information, data were input into SPSS and then cleaned prior to analysis. Any district having missing data was eliminated from the sample. Data were analyzed to determine if there was a relationship between the assessed valuation and the number of students with disabilities in Missouri school districts. The study included a total sampling save one district in order to ensure a valid estimate of a generalized relationship between variables was obtained.

The basic assumptions of the Pearson correlation are the level of measurement, related pairs, absence of outliers, normality of variables, linearity, and homoscedasticity. The level of measurement in a Pearson correlation will have continuous variables. Related pairs refer to the pair of variables. Each participant will have a pair of values. Absence of outliers refers to not having outliers present in either variable. Linearity and homoscedasticity refer to the shape of the values formed by the scatterplot. Linearity requires a straight-line relationship between the variable is formed. Homoscedasticity is

characterized by equal statistical variances. The scatterplot should be tube-like in shape (Statistics Solutions, 2013).

The researcher examined the relationship between the assessed valuation and the number of students with disabilities in Missouri school districts to determine if there was significance at the .05 level. If the data showed significance at the .05 level, the reasonable standard for rejecting the null hypothesis known as the alpha level would have been met. The accepted probability value for the alpha level was set at .05. According to Pelham (2013), the researcher may reject the null hypothesis and conclude the hypothesis is correct only when findings occurred by chance less than 5% of the time. The answers to the research questions were determined through data gathered from The Missouri Department of Elementary and Secondary Education Web site. Schools were identified based on DESE's coding system in order to ensure anonymity of the school districts used in the study.

To further enhance the value of the study, the researcher conducted a multiple regression test. The researcher had to determine whether or not the data from the Pearson's r test allowed for regression data to be collected. The researcher was able to understand which independent factors (district size and year) had a predictive value through the use of the multiple regression analysis on the dependent variable (percent of students with disabilities). The use of multiple regression analysis allowed for better recommendations through the correlation of assessed valuation and the predictive power of the percentage of students with disabilities in school districts.

## **Summary**

This chapter outlined the methodology for this study. This included the research questions and hypothesis, procedures, design, sampling, instrument, participants, and data analysis. In Chapter Four the researcher will analyze the collected data and findings of the study. Chapter Five will provide a summary of the study, conclusions, and recommendations.

## CHAPTER FOUR

### ANALYSIS OF THE DATA

#### **Introduction**

The intent of this study was to examine the relationship between assessed valuation and the percent of students with disabilities in Missouri school districts. With the projected expenditures for public schools in the United States reaching \$670,000,000,000 in the next 13 years (Hussar & Bailey, 2018) and the United States providing special education services to 6,700,000 students (McFarland et al., 2018) there is a need to find ways to provide a quality education to all students. It is essential to continue to improve the education of students with disabilities in order to provide them an equal opportunity, participation, independent living, and economic self-sufficiency (U.S. Department of Education, 2018). Identifying whether or not assessed valuation reflected the percent of students with disabilities in Missouri school districts could assist leaders to make changes in those school districts.

Data were downloaded from DESE's open access database and uploaded in SPSS for analysis. Descriptive statistics were utilized to present quantitative data in a manageable way. Data will be presented in this chapter giving insight into the following research questions:

1. What is the relationship between the assessed valuation of a school district and the percent of students with a disability within the school district among elementary and secondary schools in Missouri from 2012-2017?
2. What is the predictive power of students with disabilities in Missouri school districts from 2012-2017 on assessed valuations?

Based on the data collected during the research investigation, the following null hypotheses were tested:

- H<sub>01</sub>. There will be no statistically significant relationship between the assessed valuation of a school district and the percent of students with a disability within the school district among elementary and secondary schools in Missouri from 2012-2017.
- H<sub>02</sub>. There is no statistically significant predictive power of students with disabilities in Missouri school districts from 2012-2017 on assessed valuations.

Each question and related hypothesis were investigated through quantitative analysis, with the researcher conducting Pearson correlations to determine the strength of possible relationships. Based on the initial data analysis, further analysis using a multiple regression was performed to determine the potential for predictive measures. In addition, after analyzing the data and determining the significance, further details were revealed that were not specifically addressed with the research questions.

### **Data Analysis and Findings**

Data for this study were collected by the researcher, directly extracted from the DESE open access Web site, and input into SPSS in order to make comparisons between the variables. Following the examination of each school's 2012-2017 annual assessed valuation, data were collected regarding students with disabilities child count for years 2012-2017. A correlation design was used in order to show the relationship between Missouri public school districts' assessed valuation and the number of students with a disability in the district. A multiple regression follow-up was completed to determine any possible data trends. This research helped to determine if there was a relationship

between the percent of students identified as having a disability and the assessed valuation of the school district. As a result, school districts may explore opportunities to help provide quality education to students identified as having a disability with predictions based on their assessed valuation. This would help in financial planning as well as planning for staff needs.

### **Samples**

This study used a total population sampling by using the data for all public schools in the state of Missouri with the exception of the researcher's district. Four hundred and twenty-two school districts were used in the study. School districts that were identified as K-8 school districts and charter, parochial, private, and the researcher's own school district were not used in this study. Only Missouri public schools with a kindergarten through 12<sup>th</sup> grade student enrollment were used in this study. Charter, parochial, and private schools do not have assessed valuations. K-8 school districts do not have a large enough enrollment to give an accurate sample for the research.

Data were extracted from DESE's open access database, input into SPSS, and then analyzed seeking possible relationships between districts' assessed valuation and the number of special education students in the district. The researcher completed an ethics class and all of the following ethical standards were applied. Results were uploaded into SPSS. The researcher deleted the columns with the school districts' names from the Excel copy of the survey report. After the completion of the study, the researcher will keep the information on a secured thumb drive for 5 years and then destroy it.

## **Demographics**

The researcher used the open access data on The Missouri Department of Elementary and Secondary Education Web site to collect data for the public school districts in the state of Missouri. The database had open access and was available to the public. Use of the database as an instrument was appropriate, as it included all data collected from every school district in the state, and was verified for validity and reliability by DESE via the MSIP evaluation process. DESE is an established educational community that compiles a statewide open access database for educational use. This research made comparisons of data extracted from this open access DESE database with regard to districts' assessed valuation and special education counts.

## **Data Cleaning**

School districts that were identified as K-8 school districts and charter, parochial, and private school districts were not used in this study. The researcher's own school district was also eliminated from the study to eliminate any possible research bias. Only Missouri public schools with a kindergarten through 12<sup>th</sup>-grade student enrollment were used in this study. Ten districts having missing data were eliminated from the sample.

## Descriptive Statistics

Table 1

### *Pearson r Correlation Research Question 1: Descriptive Statistics*

	Mean	Std. Deviation	N
AV2012	200238872.1	484008953.1	445
CC2012	13.1131	3.26133	442
EN2012	1906.0629	3452.86439	445
	Mean	Std. Deviation	N
AV2013	199257798.1	473395805.7	445
CC2013	13.0423	3.43685	442
EN2013	1920.0067	3514.47157	445
	Mean	Std. Deviation	N
AV2014	202374507.5	482704895.9	445
CC2014	13.3158	3.68137	442
EN2014	1917.2382	3510.06683	445
	Mean	Std. Deviation	N
AV2015	20816326.4	500343499.0	445
CC2015	13.5021	3.56883	440
EN2015	1914.0562	3501.76518	445
	Mean	Std. Deviation	N
AV2016	211823592.7	506277692.4	445
CC2016	13.7085	3.51917	443
EN2016	1908.3528	3482.44700	445

*Note.* AV stands for assessed valuation, CC stands for child count which equals the percentage of special education students, and EN stands for enrollment which references the total district enrollment.

The mean Assessed Valuation in 2012 was  $M = 200238872.1$ ,  $SD = 484008953.1$ ,  $N = 445$  and the Child Count total percentage was 13.1131%. In 2013, the mean Assessed Valuation was  $M = 199257798.1$ ,  $SD = 473395805.7$ ,  $N = 445$  and the Child Count total percentage was 13.0423%. In 2014, the mean Assessed Valuation was  $M = 202374507.5$ ,  $SD = 482704895.9$ ,  $N = 445$  and the Child Count total percentage was 13.3158%. In 2015, the mean Assessed Valuation was  $M = 20816326.4$ ,  $SD = 500343499.0$ ,  $N = 445$  and the Child Count total percentage was 13.5021%. In 2016, the

mean Assessed Valuation was  $M = 211823592.7$ ,  $SD = 506277692.4$ ,  $N = 445$  and the Child Count total percentage was 13.7085%.

### **Research Question 1**

A Pearson's  $r$  correlation was used to determine if there was a statistically significant relationship in Research Question 1: What is the relationship between the assessed valuation of a school district and the percent of students with a disability within the school district among elementary and secondary schools in Missouri from 2012-2017? The data were divided into three sections, (a) assessed valuation, (b) percent of special education students, and (c) total enrollment, and then analyzed based on the specific year (2012, 2013, 2014, 2015, 2016, and 2017). The data were run to determine the relationship between the assessed valuation and the percentage of students in the child count totals.

Table 2

*Pearson r Correlation Research Question 1: Correlations*

		AV2012	CC2012	EN2012
AV2012	Pearson Correlation	1	-.082	.917 **
	Sig. (two-tailed)		.086	.000
	<i>N</i>	445	442	445
<hr/>				
AV2013	Pearson Correlation	1	-.070	.922 **
	Sig. (two-tailed)		.140	.000
	<i>N</i>	445	442	445
<hr/>				
AV2014	Pearson Correlation	1	-.088	.919 **
	Sig. (two-tailed)		.065	.000
	<i>N</i>	445	442	445
<hr/>				
AV2015	Pearson Correlation	1	-.094 *	.918 **
	Sig. (two-tailed)		.050	.000
	<i>N</i>	445	440	445
<hr/>				
AV2016	Pearson Correlation	1	-.103 *	.919 **
	Sig. (two-tailed)		.030	.000
	<i>N</i>	445	443	445

\*Correlation is significant at the 0.05 level (2-tailed)

\*\*Correlation is significant at the 0.01 level (2-tailed)

**Analysis of 2012 data**

What is the relationship between the assessed valuation of a school district and the percent of students with a disability within the school district among elementary and secondary schools in Missouri from 2012?

Null: There is no statistically significant the relationship between the assessed valuation of a school district and the percent of students with a disability within the school district among elementary and secondary schools in Missouri from 2012.

There was no statistically significant correlation between assessed valuation of a school district and the percent of students with a disability within the school district among elementary and secondary schools in 2012,  $r(440) = -.082, p = .086$ . Assessed

valuation statistically explained 0.7% of the variability in the percentage of students enrolled, thus the researcher failed to reject the null hypothesis.

### **Analysis of 2013 data**

What is the relationship between the assessed valuation of a school district and the percent of students with a disability within the school district among elementary and secondary schools in Missouri from 2013?

Null: There is no statistically significant the relationship between the assessed valuation of a school district and the percent of students with a disability within the school district among elementary and secondary schools in Missouri from 2013.

There was no statistically significant correlation between assessed valuation of a school district and the percent of students with a disability within the school district among elementary and secondary schools in 2013,  $r(440) = -.070, p = .140$ . Assessed valuation statistically explained 1.96% of the variability in the percentage of students enrolled, thus the researcher failed to reject the null hypothesis.

### **Analysis of 2014 data**

What is the relationship between the assessed valuation of a school district and the percent of students with a disability within the school district among elementary and secondary schools in Missouri from 2014?

Null: There is no statistically significant the relationship between the assessed valuation of a school district and the percent of students with a disability within the school district among elementary and secondary schools in Missouri from 2014.

There was no statistically significant correlation between assessed valuation of a school district and the percent of students with a disability within the school district

among elementary and secondary schools in 2014,  $r(440) = -.088, p = .065$ . Assessed valuation statistically explained 0.4225% of the variability in the percentage of students enrolled, thus the researcher failed to reject the null hypothesis.

### **Analysis of 2015 data**

What is the relationship between the assessed valuation of a school district and the percent of students with a disability within the school district among elementary and secondary schools in Missouri from 2015?

Null: There is no statistically significant the relationship between the assessed valuation of a school district and the percent of students with a disability within the school district among elementary and secondary schools in Missouri from 2015.

There was no statistically significant correlation between assessed valuation of a school district and the percent of students with a disability within the school district among elementary and secondary schools in 2015,  $r(438) = -.094, p = .050$ . Assessed valuation statistically explained 0.25% of the variability in the percentage of students enrolled, thus the researcher rejected the null hypothesis.

### **Analysis of 2016 data**

What is the relationship between the assessed valuation of a school district and the percent of students with a disability within the school district among elementary and secondary schools in Missouri from 2016?

Null: There is no statistically significant the relationship between the assessed valuation of a school district and the percent of students with a disability within the school district among elementary and secondary schools in Missouri from 2016.

There was no statistically significant correlation between assessed valuation of a school district and the percent of students with a disability within the school district among elementary and secondary schools in 2016,  $r(441) = -.103, p = .030$ . Assessed valuation statistically explained 0.09% of the variability in the percentage of students enrolled, thus the researcher rejected the null hypothesis.

Using the Pearson's  $r$ , the data indicated there was not a statistically significant relationship between the assessed valuation and the percentage of students in the child count totals for the years 2012-2015; however, there was a significant correlation at the 0.05 level in the years 2016 and 2017 between the assessed valuation and the percentage of students in the child count totals. The Pearson's  $r$  coefficient for Research Question 1 was  $-.094$  for 2016 and  $-.103$  for 2017 as reflected in Table 1.

## **Research Question 2**

A multiple regression was used to determine if there was possible predictive analysis based on the data collected to address Research Question 2: What is the predictive power of students with disabilities in Missouri school districts from 2012-2017 on assessed valuations? The second research question was designed to determine whether there was a relationship between the school district enrollment, assessed valuation, and the percentage of students with disabilities. The percentage of students with disabilities could not be predicted using multiple regression due to the fact the assessed valuations and enrollment totals for school districts were too highly correlated to a very narrow range of value. Using the multiple regression, the data indicated there was not a statistically significant relationship between the assessed valuation of a school district and the total enrollment, thus the researcher failed to reject the null hypothesis.

Table 3

*Multiple Regression Research Question 2: Regression-Model Summary*

	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2016</u>	<u>2017</u>
<i>R</i>	.174	.150	.150	.157	.148
<i>R</i> Square	.030	.022	.023	.025	.022
Adjusted <i>R</i> Square	.026	.018	.018	.020	.018
Std. Error	3.21906	3.40590	3.64777	3.53286	3.4881

Note. Predictors are Enrollment and Assessed Valuation.

Table 4

*Multiple Regression Research Question 2: Regression-ANOVA*

2012	Sum of SQ	<i>df</i>	Mean SQ	<i>F</i>	Sig
Regression	141.545	2	70.772	6.830	.001
Residual	4549.057	439	10.362		
Total	4690.601	441			
2013	Sum of SQ	<i>df</i>	Mean SQ	<i>F</i>	Sig
Regression	116.609	2	58.304	5.026	.007
Residual	5092.453	439	11.600		
Total	5209.062	441			
2014	Sum of SQ	<i>df</i>	Mean SQ	<i>F</i>	Sig
Regression	135.191	2	67.595	5.080	.007
Residual	5841.439	439	13.306		
Total	5976.630	441			
2015	Sum of SQ	<i>df</i>	Mean SQ	<i>F</i>	Sig
Regression	137.118	2	68.559	5.493	.004
Residual	5454.225	437	12.481		
Total	5591.343	439			
2016	Sum of SQ	<i>df</i>	Mean SQ	<i>F</i>	Sig
Regression	120.515	2	60.257	4.953	.007
Residual	5353.450	440	12.167		
Total	5473.964	442			

Note. Dependent Variable is Child Count and Predictors are Enrollment and AV.

Table 5

*Multiple Regression Research Question 2: Regression-Coefficients*

2012	<u>Unstandardized Coeff.</u>		<u>Standardized Coeff.</u>		Sig
	B	Std. Error	Beta	t	
Constant	13.441	.179		75.232	.000
AV	1.811E-9	.000	.270	2.295	.022
Enrollment	.000	.000	-.383	-3.262	.001
2013	<u>Unstandardized Coeff.</u>		<u>Standardized Coeff.</u>		Sig
	B	Std. Error	Beta	t	
Constant	13.331	.188		70.876	.000
AV	1.767E-9	.000	.244	2.002	.046
Enrollment	.000	.000	-.341	-2.798	.005
2014	<u>Unstandardized Coeff.</u>		<u>Standardized Coeff.</u>		Sig
	B	Std. Error	Beta	t	
Constant	13.636	.201		67.739	.000
AV	1.496E-9	.000	.197	1.643	.101
Enrollment	.000	.000	-.310	-2.587	.010
2015	<u>Unstandardized Coeff.</u>		<u>Standardized Coeff.</u>		Sig
	B	Std. Error	Beta	t	
Constant	13.829	.196		70.639	.000
AV	1.400E-9	.000	.197	1.653	.099
Enrollment	.000	.000	-.317	-2.656	.008
2016	<u>Unstandardized Coeff.</u>		<u>Standardized Coeff.</u>		Sig
	B	Std. Error	Beta	t	
Constant	14.017	.193		72.804	.000
AV	1.003E-9	.000	.145	1.211	.227
Enrollment	.000	.000	-.270	-2.259	.024

*Note.* Dependent variable is Child Count. AV is Assessed Valuation.

### **Analysis of 2012 data**

A multiple regression was run to predict the enrollment of students with disabilities in Missouri school districts in 2012 from assessed valuations and total school enrollment for 2012. The multiple regression model statistically predicted CC2012,  $F(2, 439) = 6.830, p = .001, \text{adjusted } R^2 = .026$ . Although the 2012 regression model was statistically significant, the coefficients for Assessed Value and Enrollment were nearly zero when predicting the percentage of students with special needs. Therefore, Assessed Value and Enrollment could not be used as predictors, thus the research failed to reject the null hypothesis.

### **Analysis of 2013 data**

A multiple regression was run to predict the enrollment of students with disabilities in Missouri school districts in 2013 from assessed valuations and total school enrollment for 2013. The multiple regression model statistically predicted CC2013,  $F(2, 439) = 5.026, p = .007, \text{adjusted } R^2 = .018$ . Although the 2013 regression model was statistically significant, the coefficients for Assessed Value and Enrollment were nearly zero when predicting the percentage of students with special needs. Therefore, Assessed Value and Enrollment could not be used as predictors, thus the researcher failed to reject the null hypothesis.

### **Analysis of 2014 data**

A multiple regression was run to predict the enrollment of students with disabilities in Missouri school districts in 2014 from assessed valuations and total school enrollment for 2014. The multiple regression model statistically predicted CC2014,  $F(2, 439) = 5.080, p = .007, \text{adjusted } R^2 = .018$ . Although the 2014 regression model was

statistically significant, the coefficients for Assessed Value and Enrollment were nearly zero when predicting the percentage of students with special needs. Therefore, Assessed Value and Enrollment could not be used as predictors, thus the researcher failed to reject the null hypothesis.

#### **Analysis of 2015 data**

A multiple regression was run to predict the enrollment of students with disabilities in Missouri school districts in 2015 from assessed valuations and total school enrollment for 2015. The multiple regression model statistically predicted CC2012,  $F(2, 437) = 5.493, p = .004, \text{adjusted } R^2 = .020$ . Although the 2015 regression model was statistically significant, the coefficients for Assessed Value and Enrollment were nearly zero when predicting the percentage of students with special needs. Therefore, Assessed Value and Enrollment could not be used as predictors, thus the researcher failed to reject the null hypothesis.

#### **Analysis of 2016 data**

A multiple regression was run to predict the enrollment of students with disabilities in Missouri school districts in 2016 from assessed valuations and total school enrollment for 2016. The multiple regression model statistically predicted CC2016,  $F(2, 440) = 4.953, p = .007, \text{adjusted } R^2 = .018$ . Although the 2016 regression model was statistically significant, the coefficients for Assessed Value and Enrollment were nearly zero when predicting the percentage of students with special needs. Therefore, Assessed Value and Enrollment could not be used as predictors, thus the researcher failed to reject the null hypothesis.

## Summary

The statistical analysis and findings of this study exploring the relationship between assessed valuation and the percentage of students with disabilities in Missouri school districts from 2012-2017 were presented in this chapter. Two null hypotheses were tested:

H<sub>0</sub>1. There is no statistically significance between the valuation of a school district and the percent of students with a disability within the school district among elementary and secondary schools in Missouri from 2012-2017? The researcher failed to reject this null hypothesis.

H<sub>0</sub>2. There is no statistically significant predictive power of students with disabilities in Missouri school districts from 2012-2017 on assessed valuations. This null hypothesis was rejected.

Statistical significance was noted with regard to the assessed valuation and percentage of students with disabilities in 2016 and 2017. Information and insight were been gained regarding the relationship between assessed valuation, the percentage of students with disabilities, and the total enrollment of a school district. Chapter Five will present a summary of the findings, conclusions drawn from the data, professional implications, and recommendations for further research.

## CHAPTER FIVE

### CONCLUSIONS AND RECOMMENDATIONS

#### **Introduction**

The purpose of this study was to examine the relationship between the percent of students identified as having a disability and the assessed valuation of the school district. By collecting data on the assessed valuation and the percentage of students with disabilities within a school district, the researcher was able to determine the relationship between these factors and make recommendations regarding implementations in an educational setting. This chapter includes a summary of the research questions, summary of the design procedures and methods used in the research, findings, conclusions, and recommendations.

#### **Research Questions**

Through the examination of data gathered from the DESE Web site for school districts, the following questions were answered:

1. What is the relationship between the assessed valuation of a school district and the percent of students with a disability within the school district among elementary and secondary schools in Missouri from 2012-2017?
2. What is the predictive power of students with disabilities in Missouri school districts from 2012-2017 on assessed valuations?

Based on the data collected during the research investigation, the following null hypotheses were tested:

- H<sub>0</sub>1. There will be no statistically significant relationship between the assessed valuation of a school district and the percent of students with a disability

within the school district among elementary and secondary schools in Missouri from 2012-2017.

H<sub>02</sub>. There is no statistically significant predictive power of students with disabilities in Missouri school districts from 2012-2017 on assessed valuations.

### **Summary of Methods**

Each question and related hypothesis were investigated through quantitative analysis, conducting Pearson correlations to determine the strength of possible relationships. Based on the initial data analysis, further analysis using a multiple regression was performed to determine the potential for predictive measures. Data for this study were collected by the researcher, directly extracted from the DESE open access Web site, and input into SPSS in order to make comparisons between the variables. Following the examination of each school's 2012-2017 annual assessed valuation, data were collected regarding students with disabilities child count for years 2012-2017. A correlation design was used in order to show the relationship between Missouri public school districts' assessed valuation and the number of students with a disability in the district. A multiple regression follow-up was completed to determine any possible data trends. This research helped to determine if there was a relationship between the percent of students identified as having a disability and the assessed valuation of the school district. As a result, school districts may explore opportunities to help provide quality education to students identified as having a disability with predictions based on their assessed valuation. This would help in financial planning as well as planning for staff needs. This study used a total population sampling by using the data for all public schools

in the state of Missouri with the exception of the researcher's district. Four hundred and twenty-two school districts were used in the study. School districts that were identified as K-8 school districts and charter, parochial, private, and the researcher's own school district were not used in this study. Only Missouri public schools with a kindergarten through 12<sup>th</sup>- grade student enrollment were used in this study. Charter, parochial, and private schools do not have assessed valuations. K-8 school districts do not have a large enough enrollment to give an accurate sample for the research.

To further enhance the value of the study, the researcher conducted a multiple regression test. The researcher had to determine whether or not the data from the Pearson's *r* test allowed for regression data to be collected. The researcher was able to understand which independent factors (district size and year) had a predictive value through the use of the multiple regression analysis on the dependent variable (percent of students with disabilities). The use of multiple regression analysis allowed for better recommendations through the correlation of assessed valuation and the predictive power of the percentage of students with disabilities in school districts.

### **Summary of Findings**

The purpose of this study was to examine the relationship between the percent of students identified as having a disability and the assessed valuation of the school district. While there has been considerable research regarding both the impact of assessed valuation and percentage of students with disabilities on education, the researcher wanted to determine whether a statistically significant relationship existed between the two. In addition, the researcher wanted to enhance the body of research around assessed valuation and students with disabilities, and clarify any implications that could impact

education or school districts. The following sections provide details regarding the findings of each research question addressed in this study.

### **Assessed Valuation and the Percentage of Students With Disabilities**

A Pearson's  $r$  correlation was used to determine if there was a relationship in Research Question 1: What is the relationship between the assessed valuation of a school district and the percent of students with a disability within the school district among elementary and secondary schools in Missouri from 2012-2017? The data were run to determine the relationship between the assessed valuation and the percentage of students in the child count totals. Using the Pearson's  $r$ , the data indicated there was not a statistically significant relationship between the assessed valuation and the percentage of students in the child count totals for the years 2012-2015; however, there was a significant correlation at the 0.05 level in the years 2016 and 2017 between the assessed valuation and the percentage of students in the child count totals.

The Pearson  $r$  coefficient for Research Question 1 was -.094 for 2016 and -.103 for 2017. Based on the data, the Pearson coefficient indicated a negative relationship between the assessed valuation and the percentage of child count students in a school district; however, it was not at a statistically significant level, meaning, as assessed valuation increased, the percentage of students with disabilities decreased, but not at a statistically significant level, thus the researcher failed to reject the null hypothesis. While the relationship between assessed valuation and the percentage of students with disabilities did not yield a statistically significant relationship for each year of the study, data indicated the relationship was trending toward a statistically significant relationship. The data provided that in the years 2016 and 2017, as assessed valuation increased, the

percentage of students with disabilities decreased. This trend could be due to the fact that generally assessed valuations increase annually.

For the approximately 6,400,000 students in the United States currently who have been identified as having a disability, the largest percent of students was placed in the disability categories of learning disabilities and speech and language impairments. The disability categories of autism and other health impairment are the fastest growing. Roughly 779,000 students have been identified as other health impaired, revealing an increase of 93% over the last 10 years. The number of students identified as autistic has risen to 498,000, a 263% increase in the last 10 years (Samuels, 2015). The U.S. Department of Education (2018) stated in the 19<sup>th</sup> Annual Report to Congress on IDEA that childhood poverty was cited as one of the five central educational challenges to educational service delivery. As childhood poverty has increased, so have the number of students with disabilities requiring special education services. Since a district's assessed valuation is based on property values, which is directly connected to socioeconomic status, the researcher predicted that lower assessed valuations might be related to higher levels of special needs students. The data, however, revealed the assessed valuation did not have a significant impact on the percentages of students receiving special education services in the school systems.

The use of public school system grading made available by the media has led to educators becoming accountable to community taxpayers (Loveland, 2012). The variance in property taxes that makes up local revenue within the states shows the consistent differences in the properties within the school districts. Even with state government revenues of equal values, property-wealthy communities can easily spend more per

student than less wealthy community school districts. Marchant et al. (2006) also found a strong relationship between the local property wealth of school districts and the students' socioeconomic status. School districts within lower assessed valuations of property would be required to maintain a considerably higher property tax rate in order to reach a comparable level of per-pupil spending.

Students of low socioeconomic status, even with high academic levels and motivation, cannot afford the same learning opportunities that students of high socioeconomic status can afford. Low socioeconomic students may have to maintain employment, lack technology at home, and financially assist the family, babysit family members, or have a poor study environment. Conflict theorists also believe education promotes the hidden curriculum, which is the nonacademic learning students acquire informally through the environment. This reinforces the positions of higher socioeconomic status and inequality (Allan, 2013). This trend is quite pertinent to Marx's conflict theory, which validates that the group in power or students of a higher socioeconomic status have access to resources and opportunities that low socioeconomic students do not have. It is social class of students that determines the quality of the educational institution and consequently future success (Omer & Jabeen, 2016).

The data from this research revealed that although socioeconomic status may impact the academic levels of students, it does not significantly impact the percentage of students receiving special education services. The number of students categorized with autism and other health impairments is rapidly growing with a 263% increase in the last 10 years (Samuels, 2015) for autism. Even with an increase in childhood poverty, which impacts the percent of students with disabilities requiring special education services, the

study revealed no significant impact on the percentage based on the assessed valuation of the school district. This reveals that the individual socioeconomic status of the student is more impactful than the general economic status of the entire school district.

### **Factors That Predict Students With Disabilities Percentages**

A multiple regression was used to determine if there was possible predictive analysis based on the data collected to address Research Question 2: What is the predictive power of students with disabilities in Missouri school districts from 2012-2017 on assessed valuations? The second research question was designed to determine whether there was a relationship between the school district enrollment, assessed valuation, and the percentage of students with disabilities. The percentage of students with disabilities could not be predicted using multiple regression due to the fact the assessed valuations and enrollment totals for school districts were too highly correlated to a very narrow range of value.

The reason for the narrow range of value could be associated with the characteristics of Missouri school districts. Missouri is composed of three large school districts: Springfield R-XII (44,782 students), Rockwood (44,442 students), and St. Louis City (44,264 students), which account for 133,488 of the 883,909 total Missouri student enrollment or 15%. These three districts also have assessed valuations of over \$3,400,000,000 each, which accounts for almost 8% of the \$140,000,000,000 total assess valuation for the state of Missouri. A majority of the remaining Missouri school districts are considered rural districts with similar property values and student enrollments. The lack of range and variation thus leads to the data results being tightly clustered and no significance was found. Using the multiple regression, the data indicated there was not a

statistically significant relationship between the assessed valuation of a school district and the total enrollment.

### **Implications for Educational Practice**

There are implications that this study has on future research, as well as the field of education in general. With no relationship found between assessed valuation and the percentage of students receiving special education services, school districts will need to continue to find appropriate, cost effective means to educate these students. Although the state of Missouri provides some additional funding for special education students, it does not cover the total expenses of the related services to grant a quality education that meets the needs of severely disabled students. School districts need to continue to plan accordingly to grant the special education students their educational rights to a quality education as outlined in state and federal statutes and make this a professional development focus within the school district.

Trends in special education have indicated a 263% increase in the number of students with autism. This insight can guide administrators by targeting identified needs of the teachers of the students and materials required to assist in the students' education. Administrators will need to communicate with the special education department as well as the staff concerning potential students identified with autism and their needs. Professional development for all faculty and staff will assure these needs are met for both the educators and students.

### **Recommendations for Future Research**

Building on this study, the next phase of research could include comparing other states to the results found in Missouri. The review of literature in this study focused

mainly on the history of assessed valuations and special education in the state of Missouri. A future study may look at the history of these factors in different states and compare the data to what was found in the state of Missouri. Another recommendation might be specifically based on assessed valuations and why the state of Missouri's assessed valuation is so tightly aligned, yet the tax base and cost per pupil do not fall in that same alignment. The three largest school districts in the state, St. Louis City, Kansas City, and Springfield not only account for 81,428 ADA of school districts, but also Assessed Valuations of \$4,187,363,318 (St. Louis), \$3,185,224,998 (Kansas City), and \$3,601,528,129 (Springfield) three of the largest Assessed Valuations in the state as well (DESE, 2019). When these school districts were omitted from the grouping, the research revealed a more accurate reading of the impact Assessed Valuation has on the Special Education percentages. As a result, further research should be conducted using school districts within the state of Missouri with similar enrollments to create a more accurate result of the impact of assessed valuations on the special education child count percentages. Additionally, since the assessed valuations were shown in this study to be tightly aligned to the total population of Missouri, it is possible that if districts were compared with others of similar enrollments rather than the total population, more specific factors might be uncovered. Similarly, if further research focused on specific district location (rural, urban, suburban) and compared data regarding assessed valuation and special education child counts trends might possibly emerge. School districts of similar enrollments could also be compared to similar sized school districts in other states to study the impact of assessed valuation on the special education child count percentages.

Additional research could focus on possible trends in specific special education populations. A study on specific special education trends would be able to reveal growth in categories in other states other than what has been noted from the research in the state of Missouri. Also research would reveal if there are other predictors to assist in school district planning for special education teacher and student needs. Although this study researched the impact of assessed valuation and enrollment on the percentage of special education students, other predictors may influence and reveal qualitative data to enhance the study results.

### **Summary**

This study focused on the relationship between assessed valuation and the percentage of students with disabilities. School districts cannot control the economy of the community they serve. The way educators instruct students must be as ever changing and innovating as the world in which students live to allow for their success following graduation. As the world changes so do the demographics of the students within our school systems. Even though school districts are separated into districts based on geographical land divisions, the families that make up those common areas may be extremely diverse. Poverty has a great impact on the educational results for students (Park et al., 2002). Missouri districts were found to be tightly grouped with regard to assessed valuations. Additionally, Missouri was found to have three larger, outlier districts (Kansas City, St. Louis, Springfield) which had much higher assessed valuations, thus effecting the overall findings of the study. Future research needs to be done disaggregating the data further in order to minimize this effect.

This study supported previous research findings with regard to assessed valuations and the percentage of students with disabilities, however showed a growing trend of significance as well as a growing trend in special education placement in autism and other health impaired. As the largest and most accessible providers of services to students with autism, it is crucial that federal policies are enacted to establish common state-wide standards for using efficient and effective procedures for identifying children. Currently states are allowed to establish their own standards which are highly subjective. Research on effective use of early screening tools and interventions is rapidly growing, but public school systems might not be adequately resourced to support this rising need (Barton et al., 2016). Further research regarding these factors could allow school districts to plan for future financial and educational adjustments, as well as professional development for staff to be better prepared for special needs students in the future.

## REFERENCES

- Alexander, K., & Salmon, R. (1995). *Public school finance*. Needham Heights, MA: Allyn & Bacon.
- Allan, K. (2013). *The social lens: An invitation to social and sociological theory* (3rd ed.). Los Angeles, CA: Sage.
- Barrow, L., & Rouse, C. E. (2000). *Using market valuation to assess the importance and efficiency of public school spending*. Chicago, IL: Federal Reserve Bank of Chicago.
- Barton, E., Harris, B., Leech, N., Stiff, L., Choi, G., & Joel, T. (2016). An Analysis of State Autism Educational Assessment Practices and Requirements. *Journal of Autism & Developmental Disorders*, 46(3), 737–748.
- Bickel, R., & Howley, C. (2003). Math achievement and the development of poor, rural areas: Effects of contextual factors intrinsic to the modern world. *Educational Foundations*, 17(4), 83–105.
- Bondie, R. (2015). A digital teaching platform to further and assess use of evidence-based practices. *Rural Special Education Quarterly*, 34(1), 23-29.
- Buchanan, C. M. (2006). The impact of race and socioeconomic status on post-secondary achievement. *International Journal of Learning*, 13(4), 69–81. Retrieved from <https://doi.org/10.18848/1447-9494/CGP/v13i04/44852>
- Carey, K., (2002). *Education funding and low-income children: A review of current research*. Washington, DC: Center on Budget and Policy Priorities.

- Carl, K. P. (2005). *Alternatives to equity based funding formulas: An analysis of Augenblick and Myers, Inc. adequacy based successful schools and professional judgment funding models*. St. Louis, MO: Saint Louis University.
- Chilman, C., Cox, F., & Nunnally, E. (1991). Employment and economic problems. *Journal of Marriage and Family*, 53(2), 521-522. Retrieved from <https://doi.org/10.2307/352917>.
- Coleman, J. S., Campbell, E. Q., Hobson, C. J., McPartland, J., Mood, A. M., Weinfeld, F. D., & York, R. L. (1966). *Equality of educational opportunity*. Washington, DC: U.S. Government Printing Office.
- The Conversation. (2015, December 14). Why Every Student Succeeds Act still leaves most vulnerable kids behind. Retrieved from *U.S. News & World Report* website: <https://www.usnews.com/news/articles/2015-12-14/why-every-student-succeeds-act-still-leaves-most-vulnerable-kids-behind>
- Diaz, V. (2006). *Relationships between district size, socioeconomic status, actual levy percentages, and student achievement in Washington state 2nd class school districts* (Doctoral dissertation) Available from ProQuest Dissertations & Theses Global. (UMI No. 3234271). Retrieved from <http://search.proquest.com/docview/304925209?accountid=14196>
- Dickinson, E. R., & Adelson, J. L. (2014). Exploring the limitations of measures of students' socioeconomic status (SES). *Practical Assessment, Research & Evaluation*, 19(1), 1-14.

- Dieker, L. A., Hynes, M. C., Hughes, C. E., Hardin, S., & Becht, K. (2015). TLE TeachLivE™: Using technology to provide quality professional development in rural schools. *Rural Special Education Quarterly*, 34(3), 11-16.
- Duncombe, W. (2007). *Estimating the costs of meeting performance standards in the St. Louis public schools*. Syracuse, NY: Syracuse University.
- Dutro, E., & Selland, M. (2012). "I like to read, but I know I'm not good at it": Children's perspectives on high-stakes testing in a high-poverty school. *Curriculum Inquiry*, 42(3), 340-367. doi: 10.1111/j.1467-873X.2012.00597.x
- Enwefa, R. L., Enwefa, S. C., & Jennings, R. (2006). Special education: Examining the impact of poverty on the quality of life of families of children with disabilities. *Forum on Public Policy Online*, 2006(1), 1-27.
- Fishman, D. (2015). School reform for rural America. *Education Next*, 15(3), 9-15.
- Fram, M.S., Miller-Cribbs, J.E., & Van Horn, L. (2007). Poverty, race, and the contexts of achievement: Examining educational experiences of children in the U.S. south. *Social Work*, 52(4), 309-319.
- Fujiura, G. T., & Yamaki, K. (2000). Trends in demography of childhood poverty and disability. *Exceptional Children*, 66(2), 187-199.
- Giroux, H. (2017). Pedagogy, civil rights, and the project of insurrectional democracy. *Howard Journal of Communications*, 28(2), 203-206. Retrieved from <https://doi.org/10.1080/10646175.2017.1287610>.
- Goar, H. (2018). Conflict theory & deviance. *Conflict Theory & Deviance -- Research Starters Sociology*, 1-6.

- Gregory, J. (2018). Not my responsibility: The impact of separate special education systems on educators' attitudes toward inclusion. *Educational Policy Analysis and Strategic Research, 13*(1), 127–148.
- Hager, D. R. (2005). *Education accountability policy in Missouri: An exploration of the relationship between the Missouri School Improvement Program standards and student achievement* (Doctoral dissertation). Available from ProQuest Dissertations and Theses Global. (UMI No. 3189917).
- Hanushek, E. (2006). School resources. In E. A. Hanushek & F. Welch (Eds.), *Handbook of the economics of education* (Vol. 2, pp. 865–908). Amsterdam, The Netherlands: Elsevier.
- Harbin, C., Stokes, D., & Smith, J., (2011). Homes, taxes, and schools: The effects of school district rankings and property tax rates on property valuations in Richmond Heights, Missouri. Retrieved from <https://showmeinstitute.org/publication/taxes-income-earnings/homes-taxes-and-schools-effects-school-district-rankings-and>
- Hartline-Grafton, H. (2017). *The role of the supplemental nutrition assistance program in improving health and well-being*. Washington, DC: Food Research & Action Center.
- Haurin, D., & Brasington, D. (1996). School quality and real house prices: Inter- and intrametropolitan effects. *Journal of Housing Economics, 5*(4), 351–368.
- Hernandez, D. J., (2012). *Double jeopardy: How third-grade reading skills and poverty influence high school graduation*. Baltimore, MD: The Annie E. Casey Foundation.

- Hussar, W. J., & Bailey, T. M. (2018). *Projections of education statistics to 2026* (NCRS 2018-019). Washington, DC: U.S. Department of Education, National Center for Education Statistics.
- Jennings, M. M. (2005). *Real estate law* (7<sup>th</sup> ed.). Mason, OH: Thomson/South-Western West.
- Jensen, E. (2009). *Teaching with poverty in mind: What being poor does to kids' brains and what schools can do about it*. Alexandria, VA: ASCD.
- Kent, C. A., & Sowards, K. N. (2009). Property taxation and equity in public school finance. *Journal of Property Tax Assessment & Administration*, 6(1), 25–42.
- Kenyon, D. (2007). *The property tax-school funding dilemma*. Cambridge, MA: Lincoln Institute of Land Policy.
- Kretchmar, J. (2018). Conflict theory. *Research Starters Sociology*, 1–6.
- Laerd Dissertation. (2012.) Total population sampling. Retrieved from <http://dissertation.laerd.com/total-population-sampling.php>
- Lam, G. (2014). A theoretical framework of the relation between socioeconomic status and academic achievement of students. *Education*, 134(3), 326-331.
- Loveland, T. (2012). Professional development plans for technology education: Accountability-based applications at the secondary and post-secondary level. *Technology & Engineering Teacher*, 71(7), 26-31.
- Lutz, B. F. (2008). *The connection between house price appreciation and property tax revenue* (FEDS Working Paper No. 2008-48). Washington, DC: Federal Reserve Board.

- Marchant, G. J., Paulson, S. E., & Shunk, A. (2006). Relationships between high-stakes testing policies and student achievement after controlling for demographic factors in aggregated data. *Education Policy Analysis Archives, 14*(30), 1–34.  
doi: 10.14507/eaa.v14n30.2006
- Marx, K., & Engels, F. (2008). *The Communist manifesto*. Waiheke Island, New Zealand: The Floating Press.
- McFarland, J., Hussar, B., Wang, X., Zhang, J., Wang, K., Rathbun, A., ...Bullock Mann, F. American Institutes for Research (AIR). (2018). *The condition of education 2018* (NCES 2018-144). Washington, DC: National Center for Education Statistics.
- McGee, G. W. (2004). Closing the achievement gap: Lessons from Illinois' Golden Spike high-poverty high-performing schools. *Journal of Education for Students Placed At Risk, 9*(2), 97-125.
- McMahon, S. D., Parnes, A. L., Keys, C. B., & Viola, J. J. (2008). School belonging among low-income urban youth with disabilities: Testing a theoretical model. *Psychology in the Schools, 45*(5), 387–401. Retrieved from <https://doi.org/10.1002/pits.20304>
- Meadan, H., & Halle, J. W. (2004). Social perceptions of students with learning disabilities who differ in social status. *Learning Disabilities Research & Practice 19*(2), 71–82. Retrieved from <https://doi.org/10.1111/j.1540-5826.2004.00091.x>
- Missouri Department of Elementary and Secondary Education. (n.d.). A-Z index. Retrieved from <https://dese.mo.gov/azindex>

- Missouri Department of Elementary and Secondary Education. (2012). Division of School Finance. Retrieved from <https://dese.mo.gov/financial-admin-services/school-finance-0>
- Missouri Department of Elementary and Secondary Education. (2017). Special education data summaries. Retrieved from <https://apps.dese.mo.gov/MCDS/home.aspx?categoryid=5&view=2>
- Missouri Department of Elementary and Secondary Education. (2018). Exhibit 1 – Technical info. In *Reference manual: Core data & Missouri Student Information System* (p. 287). Retrieved from <https://dese.mo.gov/sites/default/files/Core-Data-Manual.pdf>
- Missouri Department of Elementary and Secondary Education. (2018). Special education. Retrieved from <https://dese.mo.gov/special-education>.
- Missouri Revisor of Statutes. (2002, August 28). Statement of Policy 162.670 Title XI Education and Libraries. Retrieved from <http://revisor.mo.gov/main/OneSection.aspx?section=162.670&bid=8021&hl=>
- Morgan, H. (2012, December 22). Poverty-stricken schools: What we can learn from the rest of the world and from successful schools in economically disadvantaged areas in the US. *Education*, 133(2), 291-297.
- Myers, B., & Hembree, R. (2004). *The Hancock Amendment: Missouri's tax limitation measure* (Report 49-2004). Retrieved from University of Missouri System, Missouri Legislative Academy website:

[https://www.researchgate.net/publication/242715011\\_The\\_Hancock\\_Amendment\\_Missouri's\\_Tax\\_Limitation\\_Measure](https://www.researchgate.net/publication/242715011_The_Hancock_Amendment_Missouri's_Tax_Limitation_Measure).

National Center for Education Statistics. (2018). *Children and youth with disabilities*.

Retrieved from [https://nces.ed.gov/programs/coe/indicator\\_cgg.asp](https://nces.ed.gov/programs/coe/indicator_cgg.asp)

Nepo, K. (2017). The use of technology to improve education. *Child & Youth Care*

*Forum*, 46(2), 207–221. Retrieved from [https://doi.org/10.1007/s10566-016-](https://doi.org/10.1007/s10566-016-9386-6)

9386-6

Ogle, G. S. (2007). *Historical review of financial equity in Missouri: 1993 foundation*

*formula and amendments* (Doctoral dissertation). Available from ProQuest

Dissertations and Theses database. (UMI No. 3351654)

Omer, S., & Jabeen, S. (2016). Exploring Karl Marx conflict theory in education: Are

Pakistani private schools maintaining status quo? *Bulletin of Education &*

*Research*, 38(2), 195–202.

Parish, S., Rose, R., Grinstein-Weiss, M., Richman, E., & Andrews, M. (2008). Material

hardship in U.S. families raising children with disabilities. *Exceptional Children*,

75(1), 71-92.

Park, J., Turnbull, A. P., & Turnbull, H. R. (2002). Impacts of poverty on quality of life

in families of children with disabilities. *Exceptional Children*, 68(2), 151–170.

Retrieved from <https://doi.org/10.1177/001440290206800201>.

Pelham, B. W. (2013). *Intermediate statistics: A conceptual course*. Thousand Oaks, CA:

Sage.

- Podgursky, M., Smith, J., & Springer, M. (2008). A new defendant at the table: An overview of Missouri school finance and recent litigation. *Peabody Journal of Education*, 83(2), 174-197.
- Pristoop, E., Lui, G., Roza, M., & Wiener, R. (2006). *Funding gaps 2006*. Retrieved from Education Trust website:  
<http://www2.edtrust.org/NR/rdonlyres/CDEF9403-5A75-437E-93FF-EBF1174181FB/0/FundingGap2006.pdf>.
- Rebell, M. (2007). Poverty, “meaningful” educational opportunity, and the necessary role of the courts. *North Carolina Law Review*, 85, 1468–1544.
- Regional Educational Laboratory Mid-Atlantic. (2015, August 27). *Engaging families in partnership programs to promote student success: Q&A for Dr. Joyce L. Epstein* [Webinar]. Retrieved from <https://files.eric.ed.gov/fulltext/ED562603.pdf>
- Samuels, C. (2015). Decades of progress, challenges under federal special education law. *Education Week*, 35(12), 1, 10-11.
- Sherman, A. (1994). *Wasting America’s future: The Children’s Defense Fund report on the costs of child poverty*. Boston, MA: Beacon Press.
- Sirmans, S. G., & Sirmans, S, C. (2012). Property tax initiatives in the United States. *Journal of Housing Research*, 22(1), 1–13.
- Smith, J. G. (2006). Parental involvement in education among low-income families: A case study. *School Community Journal*, 16(1), 43-56.
- Squires, G., & Kubrin, C. (2005). Privileged places: Race, uneven development and the geography of opportunity in urban America. *Urban Studies*, 42(1), 47-68.

- State of Missouri State Tax Commission. (2018). *Assessor manual*. Retrieved from <https://stc.mo.gov/assessmentmanual/>
- Statistics Solutions. (2013). Pearson correlation assumptions. Retrieved from <https://www.statisticssolutions.com/pearson-correlation-assumptions/>
- Stevens, C. S., Marder, M., & Nagel, S. R. (2015). Patterns in Illinois educational school data. *Physical Review Special Topics - Physics Education Research*, 11(1), 010113-1-010113-10.
- Strenze, T. (2007). Intelligence and socioeconomic success: A meta-analytic review of longitudinal research. *Intelligence*, 35(5), 401-426.
- Stringfellow, K. E. (2007). *Relationship between educational spending and student achievement in Rhode Island public schools* (Doctoral dissertation). Available from ProQuest Dissertations and Theses database. (UMI No. 3270298)
- Tavernise, S. (2012, February 10). Poor dropping further behind rich in school. *The New York Times*, p. A1.
- Teasley, M. L. (2017). The dynamics of education reform and school choice. *Children & Schools*, 39(3), 131–135. Retrieved from <https://doi.org/10.1093/cs/cdx015>
- Tilley, T. B. (2011). *Success despite socio-economics: A case study of a high achieving, high poverty school* (Doctoral Dissertation) Available from ProQuest Dissertations & Theses Global. (UMI No. 867673312).
- Ullman, E. (2007). Future proofing students: Preparing students to succeed in the global workforce. *Interactive Educator*, 3(3), 22-27.
- United States Census Bureau. (2017) QuickFacts. Retrieved from <https://www.census.gov/quickfacts/fact/table/US/PST120217>

- U.S. Department of Education. (2018). About IDEA. Retrieved from <https://sites.ed.gov/idea/about-idea/>
- Ushomirsky, N., & Williams, D. (2015). *Funding gaps 2015: Too many states still spend less on educating students who need the most*. Washington, DC: Education Trust.
- Vance, N. (2014). Privilege & disadvantage in U.S. education. Retrieved from <https://www.enotes.com/research-starters/privilege-disadvantage-u-s-education#>
- Verstegen, D. A. (2016). Policy perspectives on state elementary and secondary public education finance systems in the United States. *Educational Considerations*, 43(2), 25–32.
- Wallenstein, R. (2012). Educating students of poverty: One school's story. *Schools: Studies in Education*, 9(2), 160-175.
- Warschauer, M. (2007). A teacher's place in the digital divide. *Yearbook of the National Society for the Study of Education*, 106(2), 147-166.
- Weimer, D. L., & Wolkoff, M. L. (2001). School performance and housing values: Using non-contiguous district and incorporation boundaries to identify school effects. *National Tax Journal*, 54(2), 231–254.
- Wilgosh, L., & Scorgie, K., (2006). Fostering teacher understanding of parent issues when a child has a disability: A brief report. *Developmental Disabilities Bulletin*, 34(1), 127-136. Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&AuthType=shib&db=eric&AN=EJ815714&site=eds-live&custid=084-800>

Youngman, J. M., (2016). *A good tax: Legal and policy issues for the property tax in the United States*. Cambridge, MA: Lincoln Institute of Land Policy.